29. ENERGY

A. Provide a projection of the average daily energy demands at the end of each development phase for each of the following: electrical power, gas, oil, coal, etc. For electrical power, also provide the peak hour demand at the end of each phase.

Projected average daily electrical demands are summarized in **Table 29-1, Projected Electrical Energy Demand**. Based upon the Maximum Impact Development Scenario (MIDS), the project will have an annual energy demand of 118,935,176 kWh, a cumulative total daily demand of 325,292 kWh and a cumulative total Peak Hour Demand of 43,559 kWh.

TABLE 29-1
Projected Electrical Energy Demand

Land Use	Units (2026 – 2036)	Annual Energy (kWh/yr)	Daily Energy (kWh/day)	Peak Hour (kWh =kW)
Residential				
- SF Detached	1,029 homes	11,319,000	31,011	4,522
- SF Attached	4,532 townhomes	40,788,000	111,748	13,969
- Multi-Family	2,239 units	14,553,500	39,873	4,153
Retail	673,902 sf	18,407,596	49,874	8,312
Office	500,000 sf	11,000,000	30,137	4,395
Industrial	892,484 sf	16,064,712	44,013	5,502
Schools	Elementary – 1,011 students	1,516,500	4,155	606
	Middle – 1,222 students	2,016,300	5,524	806
	High School – 1,630 students	3,178,500	8,708	1,270
Community Uses Open Space, Parks	249.5 acres	91,068	250	25
	TOTAL	**118,935,176**	**325,292**	**43,559**

Source: The Curtis Group

B. If there is to be an on-site electrical generating facility (post-construction) describe its proposed capacity and use.

No on-site electrical generating facilities are proposed.

C. If energy (electrical power, natural gas, etc.) is to be obtained from an off-site source, attach a letter from the firms or agencies providing service outlining:

1. The projected excess capacities of the facilities and transmission line to which connection will be made at present and for each phase through completion of the project,
2. Any other commitments that have been made for this excess capacity,

3. **A statement of the supplier's ability to provide service at all times during and after development. (The supplier must be provided with demand information in (A) above.)**

Exhibit 29-1, Letters to and from Florida Power and Light (FPL), includes a request that FPL provide the information outlined above dealing with projected excess facility capacities, commitments and the ability of the facilities to provide service to the Project Site at all times during and after development.

A response letter from FPL stating their ability to provide power to the development is attached.

D. Describe any energy conservation methods or devices incorporated into the plan of development. What considerations relative to energy conservation will be incorporated into the site planning, landscape, and building design, and equipment and lighting selection for this project?

The following energy conservation measures may be incorporated into site planning, building design, and equipment selection where feasible:

- Integrated landscaping along streets, building and parking areas can reduce heat gain from paved and impervious areas.
- All building design and construction for the Project will meet applicable requirements of the South Florida Building Code and the Florida Energy Efficient Building Code.

E. Additional Review Agency Comments

In Miami-Dade County, buildings account for more than 40% of greenhouse gas emissions. Land Use Element Objective LU-lO of the Comprehensive Development Master Plan (CDMP) encourages development patterns that reduce greenhouse gas emissions by increasing energy conservation and sourcing a portion of energy from solar among other strategies. The subject application intends to add significant urban development to the proposed site which shall increase energy use, emissions, and the Urban Heat Island effect locally and throughout Miami-Dade County. Further, the reduction of building energy use in Miami-Dade County is a key approach of the County's Climate Action Strategy, and the use of ultra-low or net-zero energy buildings is a specific recommended action.

Applicant shall:

a. Address how the proposed development shall employ energy conservation as well as reduce its greenhouse gas emissions and Urban Heat Island effect. In addition, the Applicant’s response should address consistency with Miami-Dade County’s CDMP and Climate Action Strategy.

City Park is being planned as a compact, mixed-use, transit-oriented community that reduces vehicle miles traveled and concentrates homes, jobs and services so more trips are walkable, bikeable or served by shared shuttles. At the site and

building scale the project will pursue energy-efficiency and low-carbon pathways — including high-performance building envelopes, electrification-ready design, distributed solar (roofs/carports), At the urban scale the plan increases permeable green area and native tree canopy, prioritizes cool roofs and high-albedo pavements in high-use public spaces, and integrates vegetated stormwater features and green corridors to provide evaporative cooling and shade. These combined actions reduce cooling loads, lower on-site GHG emissions, and reduce surface and air temperatures that contribute to the UHI effect.

Planned measures and options under consideration

- Land-use & Mobility: mixed-use Village Core, TOD node, protected bike lanes, off-street greenway network, and community shuttles to lower VMT and tailpipe emissions.
- Buildings & Energy: design for all-electric building systems where feasible, require cool-roof performance for non-residential and larger multi-family buildings, solar-ready roofs and incentives for rooftop PV + battery storage, envelope performance above code and low-energy HVAC.
- Materials & Surfaces: high-albedo paving in plazas and sidewalks, porous/permeable pavement pilots for secondary streets and parking, and specification of reflective SRI thresholds for curated public surfaces.
- Nature-Based Cooling: increase native canopy, bioswale corridors, and lakes/shoreline oriented design to maximize micro-climate cooling while meeting County policy on park dedications and LOS.
- Electrification & EV Support: EV-ready residential parking, phased installation of Level-2 workplace and public chargers, dedicated depot chargers for shuttle/fleet electrification, and managed/ off-peak charging strategies.

The City Park approach directly implements the types of actions recommended in Miami-Dade's Climate Action Strategy (energy & buildings, land use & transportation, and electrification priorities) and supports CDMP objectives that call for climate-aware land-use planning, reduction of vehicle dependence, and strategies to reduce Urban Heat Island impacts (e.g., canopy, cool roofs, permeable surfaces). The project's combination of land-use, building and landscape measures aligns with the County's direction to cut GHGs and adapt community design to reduce heat and increase resilience.

b. With regards to urban heat, the 2021 Miami-Dade Urban Tree Canopy Assessment clearly identifies important relationships between urban development and heat. These include a clear pattern of increasing urban heat with increasing development. For example, an up to 17 degrees Fahrenheit (degF) difference in temperature has been observed between the most and least developed areas of Miami-Dade County. Changes in temperature are most drastic with land use changes similar to this proposed development, i.e., conversion of habitat/wooded areas to any other class of land use and conversion of pervious surfaces to impervious (up to 6-7.5 deg F increase in surface temperature). The application shall address strategies around these issues related to high-performance building designs, energy efficiency, renewable energy, heat mitigation, or emission reduction.

Miami-Dade's 2021 Urban Tree Canopy Assessment documents a clear

relationship between development intensity and surface/air temperature — including the order-of-magnitude differences cited (large surface temperature spreads between the most and least developed areas and localized increases of ~6–7.5°F associated with conversion of pervious to impervious surfaces). The Applicant acknowledges these findings and has designed City Park specifically to avoid reproducing the heat-intensifying patterns described in the Assessment.

City Park's response targets the two principal, local drivers of increased heat identified in the Assessment: (a) loss of vegetative cover (tree canopy) and (b) increased heat-absorbing impervious surfaces and waste heat from buildings and vehicles. The project employs a layered strategy — land-use, landscape, materials, building systems and mobility measures — to reduce both surface temperatures and source emissions:

- Increase and distribute vegetative cover: the master plan converts a substantial portion of the site to connected parks, greenways and street-tree corridors and is evaluating a target canopy increase and corridor shading goals. The proposed canopy increase represents a substantial change from the existing site condition, which currently has virtually no tree canopy; establishing a distributed, mature canopy will deliver measurable shading and evapotranspirative cooling that reduce surface and ambient temperatures, improve pedestrian comfort, and help mitigate the Urban Heat Island effect.

- Reduce impervious, high-heat surfaces: the design prioritizes high-albedo materials in plazas and sidewalks, shaded parking strategies, and permeable/porous pavement pilots for secondary streets and parking where feasible to lower surface temperatures and reduce runoff. These tactics map directly to strategies Miami-Dade recommends for UHI mitigation (high albedo surfaces, porous pavement, cool roofs, and tree canopy).

- Building performance & waste-heat reduction: City Park is evaluating high-performance envelopes, cool-roof standards for non-residential and larger multi-family buildings, electrification options, and rooftop PV plus battery storage to reduce building cooling loads and local waste heat. Reduced on-site fossil fuel use and improved efficiency both lower direct heat emissions and GHGs.

- Low-carbon mobility & EV support: by concentrating mixed uses around a Village Core and TOD node, providing active-mobility corridors and planning for shared shuttles and EV readiness, City Park reduces vehicle miles traveled and tailpipe emissions (a secondary source of local heating). This supports the County's electrification and VMT-reduction goals in the Climate Action Strategy.

The portfolio of measures above is consistent with CDMP directives to consider high-albedo surfaces, porous pavement, tree canopy and cool roofs (LU-10I), and aligns with the County's Climate Action Strategy goals on buildings, energy and transportation.

City Park's combined land-use, landscape and building strategies are designed to avoid the heat-intensifying outcomes described in the 2021 Urban Tree Canopy Assessment. By emphasizing distributed canopy, high-albedo and permeable surfacing, building electrification, the project will reduce projected local surface and air temperatures and cut GHG emissions in a manner consistent with Miami-Dade County policy and the Climate Action Strategy.

c. Compared to high-density centers, suburban areas have larger homes and buildings, longer distances between services, fewer public transportation options, and features that lead to a more carbon-intensive lifestyle. Locating new development away from existing major transit corridors is also likely to increase the transportation emissions from cars and trucks. The Applicant shall address how these trips compare to existing traffic patterns, and model impacts to local air quality as required by the Air Quality Uniform Standard Rule, 73C-40.046, FAC.

City Park is planned as a compact, mixed-use, transit-oriented community (TOD node, Village Core, retail and jobs proximate to housing) and therefore is expected to generate substantially different trip patterns than a conventional, dispersed suburban subdivision. The Applicant will provide an air quality study after the transportation analysis has been reviewed and determined to be sufficient, and the Applicant has met with DERM and FDEP to determine which intersections and parking facilities are substantially impacted by project traffic. FDEP guidelines require that all LOS E and F intersections impacted by 5% or more of project traffic, and surface parking areas accommodating 1500 vehicle trips per hour, or parking garages accommodating 750 vehicles per hour be considered for air quality modeling.

d. Expanding development shall replace undeveloped land-use areas with many impervious surfaces and grey infrastructure which are likely to conduct and trap heat, further elevating issues of extreme urban heat and urban heat island effects in the area. As stated in section LU-lOl of the CDMP, Miami-Dade County shall consider strategies to reduce the urban heat island effect which may include requirements for high albedo surfaces, porous pavement, tree canopy, and cool roofs. The Applicant should address how the development shall reduce the urban heat island effect.

While new development introduces some impervious surfaces, City Park has been intentionally planned to reduce net Urban Heat Island (UHI) impacts compared to a conventional suburban/industrial redevelopment by prioritizing large, distributed open space, extensive tree canopy, water features, high-performance surface materials, shaded pedestrian corridors, building electrification and rooftop solar, and EV charging. In short, City Park trades single-use industrial row-crop farming acreage for a balanced mosaic of shade, vegetated surfaces, water cooling, reflective materials and low-carbon mobility options — consistent with CDMP LU-10I strategies and the County's Climate Action goals.

I. How City Park avoids becoming a net UHI source

1. Large, connected open-space system.
    - The master plan dedicates 249.5 acres of open space (parks, greenways and publicly accessible lake edges) — roughly 25% of

the site — and reserves an additional network of street trees and bioswale corridors across the remaining area. Converted lakes (66 acres) plus vegetated greenway corridors and canopy planting substantially increase pervious area and provide evaporative cooling and shading that reduce local surface and air temperatures.

2. Tree canopy & shade strategy.
    - City Park will provide significant urban tree canopy coverage across the developed site. The canopy will comprise native, climate-adapted species arranged to shade sidewalks, parking lots, plazas and playgrounds.
3. High-albedo and cool roofing requirements.
    - The Applicant is evaluating cool roof systems (high solar reflectance) on non-residential buildings, multi-family buildings, and single-family units. The cool roofs reduce rooftop heat gain, lower building cooling energy demand, and reduce heat re-radiation to the street.
4. High-reflectance pavement & porous materials.
    - Consider the use high-albedo surface treatments for pedestrian pavements, plaza surfaces, and parking lot surface area within mixed-use nodes; where structurally and hydrologically feasible implement permeable pavement for parking and secondary streets (bioretention / pervious concrete / permeable pavers).
5. Vegetated stormwater & blue infrastructure as cooling systems.
    - Integrate lakes, vegetated swales, and bioswales as multi-functional assets — stormwater attenuation, habitat, and evaporative cooling. Where lakes are publicly accessible, design promenades with shade and native planting to maximize comfort and microclimate benefits.
6. Compact, walkable urban form (reduced vehicle heat and emissions).
    - City Park concentrates higher intensity mixed use, retail and employment around the Village Core and TOD so daily needs are reachable by walking, biking or shuttle — this reduces vehicle miles traveled (VMT) and tailpipe heat/emissions relative to dispersed development patterns.

City Park replaces a industrial agricultural pattern with a climate-responsive neighborhood built around a large, connected park system, an increased tree canopy, cool surfaces, permeable hydrology and an aggressive EV strategy. These combined measures will reduce City Park's contribution to the Urban Heat Island Effect, lower on-site and regional greenhouse-gas emissions, and support County objectives under CDMP LU-10I and the County Climate Action Strategy.

e. The Applicant shall consider how the development would support EV fleets and EV personal vehicles.

The Applicant is considering the following**:**

1. EV-ready residential infrastructure.
    - Commitment: Pre-wire conduit to enable Level 2 EV chargers to be readily installed in garages or driveways for single-family homes and townhomes. Provide an initial baseline of installed chargers — e.g., 10% of residential parking stalls to be Level 2 ready/installed

at opening, with a trigger to increase per occupancy thresholds.

2. Public & workplace charging (commercial / office / retail).
    - Provide EV charging infrastructure in non-residential parking areas consistent with TOD and employer needs.
3. TDM and supporting measures.
    - As proposed in in Question 21 – Transportation, City Park will provide active Travel Demand Management (TDM) to reduce vehicle trips.

EXHIBIT 29-1
Letters to and from
Florida Power and Light