BRADLEY KUSHNER
Black & Veatch Management Consulting, LLC
8400 WARD PARKWAY, KANSAS CITY, MO 64114
+1 913-458-7134 | KUSHNERB@BV.COM

April 1, 2016

Carlotta Stauffer
Florida Public Service Commission
Office of Commission Clerk
2540 Shumard Oak Boulevard
Tallahassee, Florida 32399-0850

Dear Ms. Stauffer:

Enclosed please find an electronic copy of the 2016 Orlando Utilities Commission (OUC) Ten-Year Site Plan (TYSP). The 2016 OUC TYSP was prepared by Black & Veatch and is being submitted by Black & Veatch on behalf of OUC.

If you have any questions regarding the TYSP, please do not hesitate to contact me at (913) 458-7134.

Very truly yours,
BLACK & VEATCH CORPORATION

/s/ Bradley Kushner

Bradley Kushner
Director

2016 TEN-YEAR SITE PLAN

PREPARED FOR

Orlando Utilities Commission

APRIL 2016

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Building a world of difference.®

Table of Contents

LIST OF TABLES

1.0 Executive Summary

This report documents the 2016 Orlando Utilities Commission (OUC) Ten-Year Site Plan pursuant to Section 186.801 Florida Statutes and Section 25-22.070 of Florida Administrative Code. The Ten-Year Site Plan provides information required by this rule, and consists of the following additional sections:

- Utility System Description (Section 2.0)
- Strategic Issues (Section 3.0)
- Forecast of Peak Demand and Energy Consumption (Section 4.0)
- Demand-Side Management (Section 5.0)
- Forecast of Facilities Requirements (Section 6.0)
- Supply-Side Alternatives (Section 7.0)
- Economic Evaluation Criteria and Methodology (Section 8.0)
- Analysis and Results (Section 9.0)
- Environmental and Land Use Information (Section 10.0)
- Conclusions (Section 11.0)
- Ten-Year Site Plan Schedules (Section 12.0)

This Ten-Year Site Plan integrates the loads for the City of St. Cloud (St. Cloud), the power sale to the City of Vero Beach (Vero Beach), the power sale to the City of Bartow (Bartow), the power sale to the City of Lake Worth (Lake Worth), and the power sale to the City of Winter Park (Winter Park) into the analyses, as OUC has power supply agreements with these counterparties. OUC has assumed responsibility for supplying all of St. Cloud's loads through calendar year 2032 and supplementing Vero Beach's loads through calendar year 2023. OUC has a contract to provide power to Bartow through calendar year 2017, a contract to sell power to Lake Worth through calendar year2017 (with an option to extend through 2018), and a contract to sell power to Winter Park through calendar year 2019. Load forecasts for OUC and St. Cloud have been integrated into one forecast, and details of the aggregated load forecast are provided in Section 4.0. A banded forecast is provided with base case growth, high growth, and low growth scenarios. The power OUC is currently planning on providing to Vero Beach, Bartow, Lake Worth, and Winter Park is discussed in Section 2.0.

OUC is a member of the Florida Municipal Power Pool (FMPP), which consists of OUC, Lakeland Electric (Lakeland), and the Florida Municipal Power Agency (FMPA) All-Requirements Project. Power for OUC is supplied by units owned entirely by OUC, as well as units in which OUC maintains joint ownership and power purchases. OUC's available capacity as of January 1, 2016, including capacity from units owned by OUC, St. Cloud's entitlement to Stanton Energy Center Unit 2, and OUC's current power purchases, provides total net summer capacity of approximately 1,841 MW and total net winter capacity of approximately 1,897 MW[1].

[1] Net seasonal capacity ratings as of January 1, 2016. Includes capacity owned by OUC and St. Cloud, as well as OUC's contractual power purchases.

As illustrated in Section 6.0 of this report, OUC is projected to require capacity to maintain a 15 percent reserve margin beginning in the summer of 2021; given the projected timing and magnitude of capacity requirements, OUC has made no commitments to new capacity additions and will evaluate such additions as part of its ongoing resource planning activities.

2.0 Utility System Description

At the turn of the 20th century, John M. Cheney, an Orlando, Florida judge, organized the Orlando Water and Light Company and supplied electricity on a part-time basis with a 100 kW generator. Twenty-four hour service began in 1903. The population of the City of Orlando (City) had grown to roughly 10,000 by 1922, and Cheney, realizing the need for wider services than his company was capable of supplying, urged his friends to work and vote for a $975,000 bond issue to enable the citizens of Orlando to purchase and municipally operate his privately owned utility. The bond issue carried almost three to one, as did a subsequent issue for additional improvements. The citizens of Orlando acquired Cheney's company and its 2,795 electricity and 5,000 water customers for a total initial investment of $1.5 million.

In 1923, OUC was created by an act of the state legislature and was granted full authority to operate electric and water municipal utilities. The business was a paying venture from the start. By 1924, the number of customers had more than doubled, and OUC had contributed $53,000 to the City. When Orlando citizens took over operation of their utility, the City's population was less than 10,000; by 1925, it had grown to 23,000. In 1925, more than $165,000 was transferred to the City, and an additional $111,000 was transferred in 1926.

Today, OUC operates as a statutory commission created by the legislature of the State of Florida as a separate part of the government of the City. OUC has full authority over the management and control of the electric and waterworks plants in the City and has been approved by the Florida legislature to offer these services in Osceola County as well as Orange County. OUC's charter allows it to undertake, among other things, the construction, operation, and maintenance of electric generation, transmission, and distribution systems, chilled water systems, as well as water production, transmission, and distribution systems to meet the requirements of its customers.

In 1997, OUC entered into an Interlocal Agreement with the City of St. Cloud in which OUC assumed responsibility for supplying all of St. Cloud's loads for the 25-year term of the agreement, which added an additional 150 square miles of service area. OUC also assumed management of St. Cloud's existing generating units and purchase power contracts. This agreement has been extended through 2032.

2.1 EXISTING GENERATION SYSTEM

Presently, OUC has ownership interests in four electric generating plants, which are described further in this section. Table 2-1 summarizes OUC's generating facilities, which include the following:

- Stanton Energy Center Units 1 and 2, Stanton A, and Stanton B.
- Indian River Plant Combustion Turbine Units A, B, C, and D[2].
- Lakeland Electric McIntosh Unit 3.
- Florida Power & Light Company (FPL) St. Lucie Unit 2 Nuclear Generating Facility.

[2] As discussed throughout this report, OUC has purchased the steam units at the Indian River site; however, given the current condition of the units, these units do not currently provide generating capacity for OUC.

Table 2-1 Summary of OUC Generation Facilities

(As of January 1, 2016)

PLANT NAME	UNIT NO.	LOCATION (COUNTY)	UNIT TYPE	FUEL		FUEL TRANSPORT		COMMERCIAL IN-SERVICE MONTH/YEAR	EXPECTED RETIREMENT MONTH/YEAR	NET CAPABILITY	
				Pri	Alt	Pri	Alt			Summer MW	Winter MW
Indian River	A	Brevard	GT	NG	FO2	PL	TK	06/89	Unknown	15.6(1)	18.1(1)
Indian River	B	Brevard	GT	NG	FO2	PL	TK	07/89	Unknown	15.6(1)	18.1(1)
Indian River	C	Brevard	GT	NG	FO2	PL	TK	08/92	Unknown	83.0(2)	88.5(2)
Indian River	D	Brevard	GT	NG	FO2	PL	TK	10/92	Unknown	83.0(2)	88.5(2)
Stanton Energy Center	1	Orange	ST	BIT	NG	RR	PL	07/87	Unknown	302.3(3)	302.3(3)
Stanton Energy Center	2	Orange	ST	BIT	NG	RR	PL	06/96	Unknown	339.4(4)	339.4(4)
Stanton Energy Center	A	Orange	CC	NG	FO2	PL	TK	10/03	Unknown	173.6(5)	184.8(5)
Stanton Energy Center	B	Orange	CC	NG	FO2	PL	TK	02/10	Unknown	292.0	307.0
McIntosh	3	Polk	ST	BIT	--	RR	--	09/82	Unknown	133.0(6)	136.0(6)
St. Lucie(7)	2	St. Lucie	NP	UR	--	TK	--	06/83	Unknown	60.0	60.0

(1)Reflects an OUC ownership share of 48.8 percent.
(2)Reflects an OUC ownership share of 79.0 percent.
(3)Reflects an OUC ownership share of 68.6 percent.
(4)Reflects an OUC ownership share of 71.6 percent and St. Cloud entitlement of 3.4 percent.
(5)Reflects an OUC ownership share of 28.0 percent.
(6)Reflects an OUC ownership share of 40.0 percent.
(7)OUC owns approximately 6.1 percent of St. Lucie Unit No. 2. Reliability exchange divides 50 percent power from Unit No. 1 and 50 percent power from Unit No. 2.

The Stanton Energy Center is located 12 miles southeast of Orlando, Florida. The 3,280 acre site contains Units 1 and 2, as well as Units A and B, and the necessary supporting facilities. Stanton Unit 1 was placed in commercial operation on July 1, 1987, followed by Stanton Unit 2, which was placed in commercial operation on June 1, 1996. Both units are fueled by pulverized coal and utilize natural gas igniters and operate at emission levels that are within the Environmental Protection Agency (EPA) and the Florida Department of Environmental Protection (FDEP) requirement standards for sulfur dioxide (SO_2), nitrogen oxides (NO_x), and particulates. Stanton Unit 1 is a 441 MW net coal fired facility. OUC has a 68.6 percent ownership share of this unit, which provides 302 MW of capacity to the OUC system. Stanton Unit 2 is a 453 MW net coal fired generating facility. OUC maintains a 71.6 percent (324 MW) ownership share of this unit.

OUC has entered into an agreement with Kissimmee Utility Authority (KUA), FMPA, and Southern Company - Florida LLC (SCF) governing the ownership of Stanton A, a combined cycle unit at the Stanton Energy Center that began commercial operation on October 1, 2003. OUC, KUA, FMPA, and SCF are joint owners of Stanton A, with OUC maintaining a 28 percent ownership share (and purchases 52 percent), KUA and FMPA each maintaining 3.5 percent ownership shares, and SCF maintaining the remaining 65 percent of Stanton A's capacity. Stanton A is a 2x1 combined cycle utilizing General Electric combustion turbines. Stanton A is dual fueled with natural gas as the primary fuel and No. 2 oil as the backup fuel.

Stanton B is a 1x1 combined cycle utilizing General Electric combustion turbines. Stanton B is dual fueled with natural gas as the primary fuel and No. 2 oil as the backup fuel. OUC is the sole owner of Stanton B.

The Indian River Plant is located 4 miles south of Titusville on US Highway 1. The 160 acre Indian River Plant site contains three steam electric generating units (No. 1, 2, and 3) and four combustion turbine units (A, B, C, and D). The three steam turbine units were sold to Reliant in 1999, with OUC recently repurchasing the units. Given their current condition, the Indian River steam units do not provide generating capacity for OUC, but do provide OUC with future options for new generating capacity. The combustion turbine units are primarily fueled by natural gas, with No. 2 fuel oil as an alternative. OUC has a partial ownership share of 48.8 percent (approximately 31 MW summer and 36 MW winter) in Indian River Units A and B as well as a partial ownership share of 79 percent (approximately 166 MW summer and 177 MW winter) in Indian River Units C and D.

McIntosh Unit 3 is a 340 MW net coal fired unit operated by Lakeland Electric. McIntosh Unit 3 has supplementary natural gas and is capable of burning up to 20 percent petroleum coke. OUC has a 40 percent ownership share in McIntosh Unit 3, providing approximately 133 MW of capacity (summer capacity; winter capacity is 136 MW) to the OUC system.

OUC has a 6.08951 percent ownership share in St. Lucie Unit 2 (a nuclear generating facility operated by FPL), providing approximately 60 MW of generating capacity to OUC. A reliability exchange with St. Lucie Unit 1 results in half of the capacity being supplied by St. Lucie Unit 1 and half by St. Lucie Unit 2.

As part of the Interlocal Agreement with St. Cloud, OUC has operating control of the generating units owned by St. Cloud. St. Cloud has an entitlement to capacity from Stanton Unit 2 associated with its purchase through FMPA (related to FMPA's participation in the Stanton II Project). FMPA's ownership in Stanton Unit 2 through the Stanton II Project is 23.2 percent and St. Cloud's purchase from FMPA's Stanton Unit 2 ownership is 14.67 percent.

2.2 PURCHASE POWER RESOURCES[3]

OUC has a purchase power agreement (PPA) with SCF for 80 percent of SCF's ownership share of Stanton A. Under the original Stanton A PPA, OUC, KUA, and FMPA agreed to purchase all of SCF's 65 percent capacity share of Stanton A for 10 years, although the utilities retained the right to reduce the capacity purchased from SCF by 50 MW each year, beginning in the sixth year of the PPA, as long as the total reduction in capacity purchased did not exceed 200 MW. The utilities originally had options to extend the PPA beyond its initial term. OUC, KUA, and FMPA have unilateral options to purchase all of Stanton A's capacity for the estimated 30-year useful life of the unit. Subsequent amendments to the original PPA continue OUC's capacity purchase through the 20th year of the PPA. Beginning with the 16th contract year and ending with the 20th contract year, OUC will maintain the irrevocable right to reduce the amount of capacity purchased by either 20 MW or 40 MW per year, as long as the total reduction in purchased capacity does not exceed 160 MW (this Ten-Year Site Plan reflects a 40 MW reduction to the Stanton A PPA beginning October 1, 2018). Additionally, OUC has the option of terminating the PPA after the 20th contract year, which ends September 30, 2023. Rather than terminating the PPA, OUC may elect to continue the PPA for an additional 5 years under the Extended Term option beginning October 1, 2023, and ending September 30, 2028. OUC may subsequently continue the PPA for an additional 5 years under the Further Extension option beginning October 1, 2028, and ending September 30, 2033. OUC has not made any commitments to extend or terminate the PPA with SCF at this time; discussion of OUC's projected capacity requirements throughout this Ten-Year Site Plan reflect expiration of the SCF PPA after September 30, 2023.

2.3 POWER SALES CONTRACTS

OUC has had a number of power sales contracts with various entities over the past several years. OUC is currently contractually obligated to supply supplementary power to Vero Beach under a partial requirements power sales contract. OUC also has a contract to provide power to Bartow through 2017 (with an option to extend through 2018). Bartow purchases the power from OUC, and then distributes it to its customers through its existing infrastructure. OUC has a contract to provide power to Lake Worth through 2018. OUC also has a contract to sell power to Winter Park through 2019.

For purposes of this Ten-Year Site Plan, OUC has assumed the winter and summer capacities and annual energy presented in Table 2-2 will be provided to Vero Beach, Bartow, Lake Worth, and Winter Park.

[3] OUC's renewable power purchases are discussed in Section 2.4 of this Ten-Year Site Plan.

Table 2-2 Projected Annual Summer and Winter Peak Capacity (MW) and Annual Net Energy for Load (GWh) to be Provided to Vero Beach, Bartow, Lake Worth, and Winter Park.

YEAR	SUMMER MW			
	VER	Bartow	Lake Worth	Winter Park
2016	139	59	34	18
2017	130	61	36	19
2018	133		38	19
2019	135			19
2020	138			
2021	141			
2022	143			
2023	146			
2024				
2025				

YEAR	WINTER MW			
	VER	Bartow	Lake Worth	Winter Park
2016	139	59	34	18
2017	140	62	36	18
2018	143		38	19
2019	145			19
2020	148			
2021	151			
2022	153			
2023	156			
2024				
2025				

YEAR	ANNUAL GWH			
	VER	Bartow	Lake Worth	Winter Park
2016	377	280	213	95
2017	362	283	220	96
2018	388		229	97
2019	382			98
2020	393			
2021	429			
2022	414			
2023	440			
2024				
2025				

All rounded to nearest MW or GWh

2.4 OUC'S RENEWABLE ENERGY AND SUSTAINABILITY INITIATIVES AND COMMUNITY ACTIVITIES

OUC is actively incorporating renewable technologies in its generation portfolio and taking other steps to reduce carbon emissions. In 2015, OUC set a Clean Energy Strategy goal of 20 percent retail sales from renewal and conservation by 2020. This target requires investment in both landfill gas and solar generation. Technologies such as solar and landfill gas allow OUC to provide the necessary power demand to customers while reducing harmful effects on the environment. Renewable energy, energy efficiency, sustainability and community activities are crucial to reducing the total needed demand for power. OUC's recent renewable energy and sustainability initiatives, as well as OUC's recent activities in the community and customer education initiatives, are discussed in the following sub-sections. [4]

2.4.1 Solar

OUC is actively working to provide opportunities for its customers to participate in solar projects and programs. One such initiative is OUC's Green Pricing Program, a service of the Green Building Program. Participation in this program helps add renewable energy to OUC's generation portfolio, improves regional air and water quality, and assists OUC in developing additional renewable energy resources. Also included are the Solar Photovoltaic (PV) Net Metering and PV Production Incentive Programs, which produce electricity and the Solar Thermal program, which generates heat for domestic water heating systems. Customers who participate in the Solar PV Program receive the benefit of net metering, which provides the customers with a monthly production credit on their utility bills for energy produced in excess of what the home or business can use. Any excess electricity generated and delivered by the solar PV systems back to OUC's electric grid is credited at the customer's retail electric rate. Participating customers in the PV Production Incentive Program can install a solar PV system on their homes or businesses and sign an agreement allowing OUC to retain the rights to the environmental benefits or attributes. Customers participating in the Solar PV Credit program receive a monthly credit of $0.05 for each kWh produced from their system. Residential Customers participating in the Solar Thermal Program receive a rebate of $1,000 for installing a solar hot water system.

Residential customers may also benefit from OUC's partnership with the Orlando Federal Credit Union to provide low interest loan options for solar thermal and PV installations, helping to keep the net monthly cost low. Additional federal incentives, such as the investment tax credit, are available to eligible customers to help minimize costs.

To further facilitate development of solar energy, OUC supported Orange County in its efforts to obtain a $2.5 million grant from the Florida Department of Environmental Protection to install a 1 MW solar array on the Orange County Convention Center. The project "went live" in May 2009 and is currently producing clean, green power. In 2008, Orlando was designated a "Solar American City" by the U.S. Department of Energy (DOE). The ongoing partnership between OUC, City of Orlando and Orange County received $450,000 in funding and technical expertise to help develop solar projects in OUC's service area that can be replicated across the country.

In September 2009, OUC and clean energy company Petra Solar teamed up to launch the first utility pole-mounted solar photovoltaic system in Florida. Ten of Petra Solar's SunWave™ intelligent photovoltaic solar systems have been installed on OUC utility poles along Curry Ford Road.

[4] Please refer to Section 5.0 of this Ten-Year Site Plan for discussion of OUC's conservation and demand-side management programs.

Together the panels can generate up to 2 kW, about enough to power a small home. The innovative solar panel demonstration project is expected to help enhance the Smart Grid capabilities and reliability of the electric distribution grid. Petra Solar worked in collaboration with the University of Central Florida in developing the pole-mounted approach to clean energy generation. The SunWave systems not only turn street light and utility poles into solar generators, but they also communicate with the electric grid and can offer smart grid capabilities. The systems can improve grid reliability through real-time communications between solar generators in the field and the utility control center. In addition, the systems enhance electric distribution grid reliability through a host of capabilities such as voltage and frequency monitoring and reactive power compensation.

During 2010, OUC invested $100,000 in an educational partnership with the Orlando Science Center to build a 31 kW PV array atop the Science Center's observatory. The system provides about 42,660 kWh of electricity per year, or enough power to serve about four homes. The PV installation not only provides green power to the Science Center but also an educational experience on the science of solar energy for the thousands of children who visit the center each year.

OUC has added solar to its fleet of natural gas, coal, and landfill gas generation already on site at Stanton Energy Center. Duke Energy owns and maintains the Stanton Solar Farm, which produces about 6 MW, or enough power for about 600 homes. Brought on-line in late 2011, the Stanton Solar Farm consists of more than 25,000 modules featuring solar panels with a patented single-axis tracking system design that can withstand Category 4 hurricane winds while increasing electricity output by 30 percent. OUC plans to purchase the output of this installation, which is the first solar farm in Orange County, for 20 years. In 2015, OUC signed a power purchase agreement for approximately 13 MW (DC) of solar energy from a new solar array at the Stanton Energy Center. This solar array will be the only one in the nation to place panels over a coal ash byproduct landfill at a power plant.

In 2013, OUC built the first Community Solar Farm in Central Florida. This innovative project allowed customers to "buy a piece of the sun" and receive the benefits of solar without having to install it on their own roof. The 400 kW system sold out in six days and had a total of 39 customers sign up. The American Public Power Association (APPA) awarded OUC the 2015 Energy Innovator award on June 9, 2015 for its groundbreaking Community Solar Farm program.

Solar energy is becoming apparent with OUC's focus on installing highly-visible solar sculptures, like the structures seen at the Citrus Bowl and the Orange County Convention Center. Furthermore, OUC is deploying multiple solar mobile device charging stations at LYNX bus shelters that power up electronic devices while pedestrians are waiting.

2.4.2 Landfill Gas

The gas produced by the biological breakdown of organic matter in landfill is known as methane or landfill gas. It is created by the decomposition of wet organic waste under anaerobic, or oxygen-less, conditions in a landfill. This gas is considered a renewable energy source because the anaerobic digestion process continues as waste materials are constantly added to the landfill. In partnership with Orange County, OUC captures methane gas emissions from county landfill cells, and pipes it to the Stanton Energy center where it is co-fired with coal. In addition to helping to reduce greenhouse gas emissions, this project has the potential to displace more than 3 percent of the coal burned at the Stanton Energy Center. It will be capable of producing in excess of 100,000 MWh of reduced-emissions power– offsetting about 44,000 tons of coal each year.

OUC has also entered into long term purchase power agreements in Broward (6 MW), Charlotte (2.5 MW), and Osceola (approximately 10 MW) Counties.

In December 2015, OUC began receiving up to 9 MW from the John Drury Landfill, located in Holopaw in Osceola County, for a minimum of 9 MW with an option to expand up to 25 MW of landfill gas energy. For the John Drury project, OUC built a new 25 kV distribution line that is composed of 15.5 miles of overhead and nearly 5 miles of underground line. The new feeder line will send clean, renewable energy from the landfill to an OUC electric substation in St. Cloud and is the longest distribution feeder on the grid. This feeder will play a large role in OUC's clean energy strategy.

2.4.3 Carbon Reduction

With more than 775 vehicles – ranging from plug-in hybrids to bucket trucks – OUC's fleet logs more than 4.7 million miles annually. OUC reduces its carbon footprint by using alternative fuels, purchasing more hybrids and recycling automotive products to help the environment. As part of an overall plan to reduce emissions in fleet, OUC uses "B20" – a blend of 80 percent petroleum diesel and 20 percent biodiesel – a clean-burning alternative fuel made from new or used vegetable oils and animal fats, including recycled cooking grease. Compared to petroleum diesel, biodiesel produces lower emissions, so it is better for the environment. B20 has been integrated seamlessly into the fueling system without any changes to vehicles or fuel storage and distribution equipment. OUC uses biodiesel at the Pershing Fleet Center and the Gardenia site. As a result of a $2.5 million grant from the Florida Department of Environment Protection, Central Florida's LYNX transit system plans to open a biodiesel blending facility and fueling station at its Orlando Operations Center that will be used by both OUC and Orange County.

Embracing fuel-efficient technology as a commitment to green initiatives, OUC was the first municipal utility in Florida to acquire a plug-in hybrid vehicle that gets up to 99 miles per gallon. In addition to six fully electric vehicles and six plug-in electric vehicles, OUC has 32 other traditional hybrids in the fleet. Additionally, OUC has installed 140 fleet/employee electric vehicle (EV) charging stations to meet the needs of its growing electric fleet. OUC is a sponsor of Juice Bike Share, a program aiming to support and add more than 200 rentable bicycles at 20 locations. The rate schedule is at orlando.socialbicycles.com. OUC also offers discounts to employees who choose to utilize the SunRail commuter train and LYNX city bus system to get to and from work.

OUC currently has four hybrid bucket trucks and one auxiliary battery system to operate the aerial tower hydraulics. Bucket trucks are a promising application for hybrid technology since much of the vehicle's work is done when stationary. The hybrid diesel-electric system allows the main engine to be turned off while crews operate entirely off the battery.

OUC's Fleet Division has incorporated a number of eco-conscious policies, including the use of earth-friendly products and special care taken to dispose contaminated fuels according to environmental standards. Tires, batteries and oil filters are recycled through vendors, while freon, antifreeze and motor oil are handled onsite. OUC also has a vehicle idling policy that requires the engine to be turned off after five minutes. Diesel engines use about one gallon of fuel per hour when idling, so this policy saves about $4 per hour per vehicle.

As part of OUC's commitment to alternative fuels and efficient transportation, three of the 32 electric-vehicle charging stations at Reliable Plaza are powered by the sun. Located in the parking garage, the 16-panel solar array provides a total of 2.8 kW of power to charge the vehicles. At night or on a cloudy day when the sun is not shining, the power is drawn from Reliable Plaza. When the

sun is shining but no car is charging, the power is fed back into the building. OUC can access a special website to track real-time information and total system usage for its charging stations. A full charge takes about four hours for a Nissan Leaf. OUC also recently installed five Direct Current (DC) Fast Chargers in Orlando, which charge up to 80 percent of an EV's battery capacity in 30 minutes or less. Users have a key fob for the charging station and supply their own power cord. Plug-in drivers can go to mychargepoint.net to locate available charging stations nationwide. Users register with Chargepoint to set up an account that links to their credit card. The power is billed through a third-party agreement with Chargepoint, which remits the electricity fees back to OUC each month.

To help prepare Central Florida to support plug-ins, OUC partnered with the City of Orlando, Orange County, Rocky Mountain Institute and others as part of a national non-profit initiative called Project Get Ready. OUC and the City of Orlando also hosted the national kickoff of the U.S. Department of Energy ChargePoint America Grant, which has provided nearly 300 public charging stations to Central Florida; 135 of these stations are located in OUC's service territory. Additionally, OUC offers a rebate of $500 to commercial customers who install additional charging stations within its service territory if submitted on or before September 30, 2016.

In 2015, OUC developed a business plan for a new Commercial EV Charging Station Program that will encourage adoption of EVs by providing customers a turn-key option for charging stations at their facilities. Commercial customers have the option to own the equipment or to lease it from OUC with a maintenance package. Marketing of the program is expected to begin in 2016.

In 2015, OUC implemented a cost effective solution that ensures compliance with the EPA's regulation on Mercury and Air Toxics Standards (MATS). OUC developed a testing program to evaluate injecting halogenated activated carbon into the path of the flue gas; this allows the mercury to change its chemical state thus allowing it be captured by the electrostatic precipitator and scrubbers. Another test that is still in the research and development phase is testing how to grow and harvest algae using coal flue gas.

OUC is working on planting sections of the 3,200 acres at the Stanton Energy Center. The site uses less than 1,000 acres currently and by planting new trees, OUC will measure and track the recycling of CO_2 from the electric generating units to reduce its overall carbon footprint.

OUC continues to improve on operations at the Stanton Energy Center with a new design on the Unit 2 steam turbine that provided an additional 12 MW of output without increasing the fuel consumption or emissions. The improvement also includes adding natural gas ignitors on both units to enable them to run at lower loads and increase operation flexibility. This allows OUC to take advantage of lower natural gas prices and saves the expense of shutting the unit down for short periods of time. OUC is also planning on installing variable frequency drives on Unit 2 to improve efficiency while operating at low load levels.

2.4.4 Energy Efficiency and Sustainability

OUC's commitment to efficiency and sustainability is further demonstrated by Reliable Plaza, OUC's energy and water efficient center in south downtown that opened in 2008 and replaced OUC's 40-year-old Administration Building on South Orange Avenue. Reliable Plaza earned Gold Leadership in Energy and Environmental Design (LEED) certification in 2009, officially cementing the 10-story administration and customer service center as the "Greenest Building in Downtown Orlando." The non-profit U.S. Green Building Council awarded the Gold level certification after completing a review of the building's design and construction. Reliable Plaza also holds a Florida Water Star certification, a voluntary program for new and existing construction that encourages water efficiency in appliances, plumbing fixtures, irrigation systems and landscapes. Reliable Plaza

showcases a number of environmentally friendly features designed to use 28 percent less energy and 40 percent less water than a similarly sized facility. One of the more innovative offerings at Reliable Plaza is the interactive conservation education center.

To further demonstrate OUC's commitment to sustainability, it has many projects planned across its facilities. These projects are focused on improving building efficiency through automation and control technology on its HVAC and lighting equipment in addition to smart irrigation and Xeriscape landscape designs. OUC is currently building a living wall in an effort to showcase sustainable use of vertical space by replacing impervious surfaces, as well to give its employees the benefit of a vertical garden sitting area to take breaks in.

2.4.5 OUC's Green Team

With the philosophy that changing an organization's culture requires both corporate and individual accountability, OUC has established the Green Team – a dedicated group of employee volunteers who work to implement practical, sustainable operations in their respective work areas.

In addition to setting benchmarks and establishing metrics, the Green Team identifies ways to improve energy and water efficiency in OUC buildings, reduce waste, use product inventories more efficiently, lower emissions from operations, and create a healthier, happier environment for employees and customers.

With the Gold LEED-certified Reliable Plaza setting the standard, other OUC facilities have followed suit, implementing a number of environmental efforts, including:

- Retrofitting and upgrading light bulbs and ballasts
- Installing light sensors
- Turning up thermostats
- Cutting back on landscape and exterior building lighting
- Purchasing Energy Star-rated appliances when replacements are needed
- Using environmentally friendly cleaning products
- Upgrading HVAC systems
- Installing rain sensors on irrigation systems
- Cutting grass less frequently at water plants, substations and areas not highly visible to the public

Going forward, OUC is planning a number of new green initiatives. OUC currently has single stream recycling at all of its facilities and also recycles industrial materials such as wood pallets, utility meters, wire reels and copper. It has also developed internal policies such as electronic document storage, online document review, double-sided printing and specifies the use of recycled paper and office products whenever practicable. In the coming months, OUC will focus on reducing its energy and water usage with efficiency upgrades at its Pershing, Stanton and Gardenia facilities.

Green Your Routine At Work

In 2014, OUC educated employees on how they can be green at work through a series of lunch-and-learns that included informative presentations. Employees were asked to make a commitment to conservation and recycling while also being informed about how OUC intended to walk the walk when it comes to sustainability.

2.4.6 Sustainability Community Activities

In 2015, conservation specialists conducted presentations, provided face-to face consultations, scheduled audits, and disseminated information on conservation programs. Below is a list of events OUC Sustainability Department participated in along with Community Relations:

- Spring into Sustainability Meetings hosted in the City of Orlando and St. Cloud
- National Agriculture Day in St. Cloud
- Neighborhood & Community Summit
- NBA Green Week Fan Fest
- Green Economy Summit
- Winter Park Earth Day
- Lake Eola Earth Day
- AAGO Trade Show
- Florida Fair Housing Summit
- Orange County Community Conference
- Drive Electric Orlando
- Fall Plant and Garden Festival
- Hispanic Business and Consumer Expo
- St. Cloud Life Expo and Extravaganza [Orlando or Central Florida] Home and Garden Show

2.4.6.1 Home Utility Report Program

The Home Utility Report Program (HUR) is a free service offered to OUC customers and is designed to help them save energy, water and money. The report compares the customer's utility usage to similar households, as well as provides personalized actions that show them how much they can save. The customer can also log on to the Home Utility Report website at www.oucsavingtool.com where they can customize an action plan and even get a list of preferred contractors who can help with any efficiency needs. Participants receive a free HUR bi-monthly via email or printed report. To administer the HUR program, OUC works with a third-party company that helps utilities meet their efficiency goals through effective customer engagement. The report will go to 67,000 OUC customers in 2016.

2.5 TRANSMISSION SYSTEM

OUC's existing transmission system in Orlando consists of 31 substations interconnected through approximately 335 miles of 230 kV, 115 kV, and 69 kV lines. OUC is integrated into the Florida Reliability Coordinating Council (FRCC) regional transmission grid through twenty-one 230 kV and one 69 kV metered interconnections with other utilities, as summarized in Table 2-3. Additionally, OUC is responsible via an Interlocal Agreement for planning, operating and maintaining St. Cloud's four substations, 55 miles of transmission lines and three interconnections, as summarized in Table 2-4.

Table 2-3 OUC Transmission Interconnections

UTILITY	KV	NUMBER OF INTERCONNECTIONS
FPL	230	2
Duke Energy Florida (DEF)	230	9
KUA	230	2
KUA/FMPA	230	2
Lakeland Electric	230	1
TECO	230	2
TECO/Reedy Creek Improvement District	230	2
DEF	69	1
Southern Company	230	1

Table 2-4 St. Cloud Transmission Interconnections

UTILITY	KV	NUMBER OF INTERCONNECTIONS
OUC	69	1
DEF	230	1
KUA	69	1

The $2.3 billion I-4 Ultimate project by the Florida Department of Transportation (FDOT) and its contractor is underway for 21 miles of roadway improvements between Kirkman Road and State Road 434. Coordination of construction activities and mitigation of conflicts around the America Substation, Robinson Substation and multiple transmission lines will occur through 2019. Multiple upgrades to 115 kV transmission line segments were completed in 2015 including both Pershing to Stanton lines, Turkey Lake to Pine Hills and Southwood to MetroWest.

To maintain reliable and economic service and proactively plan for the future, OUC is evaluating numerous upgrades to its transmission system. While these upgrades vary in scope and timing, the following list provides an overview of significant projects:

- Upgrade of the double circuit 230kV transmission lines between Stanton and Pershing to meet Orlando system growth.
- An engineering study of the 230kV Stanton to Taft transmission corridor is underway with anticipated construction occurring by segment in 2018-2022. An upgrade of this corridor is necessary to reliably meet growth needs and maintain adequate transfer capability.
- A transmission line routing and feasibility engineering study for the addition of a new 230kV source into downtown Orlando has been approved. The need and timing of any such addition are very dependent on continued growth in the core downtown area.
- A new retail load serving transformer was installed at the Airport Industrial Park Substation in 2015. Depending on growth, several future distribution transformer additions to existing substations may be required in the next five years.
- Upgrade of a 69 kV tie line between the St. Cloud Central Substation and the KUA system was completed in 2015. Potential projects being evaluated to meet future growth on the St. Cloud system include an upgrade of the overhead portion of the existing St. Cloud 69 kV transmission line between the Central and South substations and construction of a new 230kV source into the system.

3.0 Strategic Issues

OUC incorporates a number of strategic considerations while planning for the electrical system. This section provides an overview of a number of these strategic considerations.

3.1 STRATEGIC BUSINESS UNITS

OUC is currently organized into two strategic business units: the Electric and Water Production (EWP) and the Electric and Water Delivery (EWD) business units.

3.1.1 Electric and Water Production Business Unit

The EWP business unit has structured its operations based on a competitive environment that assumes that even OUC's customers are not captive. EWP will only be profitable if it can produce electricity and water that is competitively priced in the open market. In line with this strategy, OUC is continually studying strategic options to improve or reposition its generating assets, such as the sale of the Indian River steam units in 1999 and the addition of new units and power purchase agreements, and the repurchase of the Indian River steam units (which provides OUC with full control over the Indian River site, and additional alternatives for future new generating resources, including possible repowering of the units)[5]. In addition, OUC formally instituted its Energy Risk Management Program in 2000.

OUC's generating system has been designed over the years to take advantage of fuel diversity and the resultant system reliability and economic benefits. OUC's longstanding intent to achieve diversity in its fuel mix is evidenced by its participation in other generating facilities in the State of Florida. The first such endeavor occurred in 1977 when OUC secured a share of the Crystal River Unit 3 nuclear plant, followed by the acquisition of an ownership share in Lakeland Electric's McIntosh Unit 3 coal fired unit in 1982. In 1983, OUC also acquired a share of the St. Lucie Unit 2 nuclear unit. OUC's current mix of wholly and jointly owned capacity is summarized in Table 3-1.

As shown in Table 3-1, coal represents approximately 49.9 percent of the winter generating capacity (approximately 51.2 percent summer) and natural gas represents approximately 46.1 percent of the winter generating capacity (approximately 44.7 percent summer) either wholly or jointly owned by OUC. With the inclusion of OUC's purchased power from Stanton A, coal represents approximately 40.8 percent of the winter generating capacity (approximately 42.1 percent summer) and natural gas represents approximately 56.0 percent of the winter generating capacity (approximately 54.6 percent summer).

[5] Based on the current condition of the Indian River steam units, OUC is not currently assigning a firm capacity value to the units for purposes of capacity planning.

Table 3-1 Generation Capacity (MW) Owned by OUC by Fuel Type

(as of January 1, 2016)

PLANT NAME	WINTER CAPACITY				SUMMER CAPACITY			
	Coal	Nuclear	Gas/Oil	Total	Coal	Nuclear	Gas/Oil	Total
Stanton[1]	627		492	1,118	627		466	1,092
Indian River			213	213			197	197
C.D. McIntosh Jr.	136			136	133			133
St. Lucie[3]		60		60		60		60
Total (MW)	**763**	**60**	**705**	**1,527**	**760**	**60**	**663**	**1,482**
Total (percent)	**49.9**	**3.9**	**46.1**	**100.0**	**51.2**	**4.0**	**44.7**	**100.0**

[1] Includes OUC's share of the landfill gas burned in Stanton Units 1 and 2.
[2] As discussed previously, Crystal River 3 is no longer in service.
[3] Capacity shown for St. Lucie reflects recent capacity uprates.

The diversity of OUC's fuel supply provides protection against disruption of supply while simultaneously providing economic opportunities to reduce cost to customers. OUC recently modified the Stanton Energy Center coal units to allow the units to offset a portion of its coal usage by burning natural gas while operating. Additional details of OUC's generating facilities are presented in Table 2-1 and Schedule 1 of Section 12.0 of this Ten-Year Site Plan.

OUC's fuel diversity is further enhanced by the renewable energy technologies that contribute to OUC's generating resources. OUC's renewable resources are discussed in detail in Section 2.4 of this Ten-Year Site Plan.

3.1.2 Electric and Water Delivery Business Unit

OUC's EWD business unit focuses on providing OUC's customers with the safest and most reliable electric service possible. In 2015, OUC once again provided the most reliable electric service of all major utilities in Florida.

OUC's leadership in providing reliable electric distribution service is demonstrated by its commitment to making initial investments in high quality material and equipment. Additionally, approximately 60 percent of OUC's distribution system is underground, protecting it from trees and high winds. OUC's dependability is also attributable to its proactive maintenance programs to identify and correct potential problems, proactive replacement of old equipment, and a tree-trimming program that minimizes tree-related service disruptions.

3.2 REPOSITION OF ASSETS

As a strategic consideration, OUC has been working on repositioning its assets. One major consideration was the sale of its Indian River power plant steam units to Reliant Energy in 1999[6]. The sale of the Indian River steam units allowed OUC to take positions in Stanton A and B and to update and diversify its generation portfolio. The sale offered OUC the ability to replace the less competitive oil and gas steam units with more competitive combined cycle generation. As part of

[6] As discussed previously, OUC recently repurchased the Indian River steam units. Given the current condition of the units, OUC is not assigning a capacity value for purposes of capacity planning. The purchase of the units provides OUC with full control over the Indian River site and additional alternatives for future generation, including possible repowering.

the agreement associated with the termination of the gasification portion of Stanton B, OUC acquired a 165-acre tract of land in its service territory situated near its highest growth areas[7] . The land is in an industrial area and is ideal for a new power generation site, having access to important infrastructure including a rail spur, natural gas lines, and OUC-owned and operated transmission lines.

3.3 FLORIDA MUNICIPAL POWER POOL

In 1988, OUC joined with Lakeland Electric and the FMPA's All-Requirements Project members to form the FMPP. Later, KUA joined FMPP. Over time, FMPA's All-Requirements Project has added members as well. FMPP is an operating-type electric pool, which dispatches all the pool members' generating resources in the most economical manner to meet the total load requirements of the pool. The central dispatch is providing savings to all parties because of reduced commitment costs and lower overall fuel costs. OUC serves as the FMPP dispatcher and handles all accounting for the allocation of fuel expenses and savings. The term of the pool agreement is 3 years and automatically renews until terminated by the consent of all participants.

OUC's participation in FMPP provides significant savings from the joint commitment and dispatch of FMPP's units. Participation in FMPP also provides OUC with a ready market for any excess energy available from OUC's generating units.

3.4 SECURITY OF POWER SUPPLY

OUC currently maintains interchange agreements with other utilities in Florida to provide electrical energy during emergency conditions. The reliability of the power supply is also enhanced by metered interconnections with other Florida utilities including nine interconnections with Progress Energy Florida (formerly Florida Power Corporation), four with KUA, two each with Tampa Electric Company and Reedy Creek Improvement District, two with FPL, and one each with Lakeland Electric and St. Cloud. In addition to enhancing reliability, these interconnections also facilitate the marketing of electric energy by OUC to and from other electric utilities in Florida.

In addition, in 2013 OUC entered into a new four-year contract for the storage of natural gas to manage price volatility and provide backup fuel for emergency situations. The fuel will provide up to 30,000 MBtu/day to help ensure power reliability.

3.5 ENVIRONMENTAL PERFORMANCE[8]

As the quality of the environment is important to Florida, and especially important to the tourist-attracted economy in Central Florida, OUC is committed to protecting human health and preserving the quality of life and the environment in Central Florida. To demonstrate this commitment, OUC has chosen to operate their generating units with emission levels below those required by permits and licenses by equipping its power plants with the best available environmental protection systems. As a result, even with a second unit in operation, the Stanton Energy Center is one of the cleanest coal fired generating stations in the nation. Unit 2 is the first of its size and kind in the nation to use selective catalytic reduction (SCR) to remove nitrogen oxides (NO_x). Using SCR and

[7] Originally proposed to be an integrated gasification combined cycle (IGCC) unit, Stanton B was designed to be able to run as a standalone natural gas unit with the gasification portion as an alternative fuel source. In 2007, OUC made the decision not to move forward with the gasification portion of Stanton B, and the unit began commercial operation in February 2010 as a 1x1 combined cycle unit operating on natural gas as the primary fuel with the capability to utilize fuel oil as a secondary fuel source.

[8] Please refer to Section 2.4 of this Ten-Year Site Plan for a detailed discussion of OUC's renewable generating technologies and other environmental initiatives.

low-NO_x burner technology, Stanton 2 successfully meets the stringent air quality requirements imposed upon it. OUC has developed a test that involves changing the chemical state of the mercury allowing it to be captured by the precipitator and scrubbers. . Stanton A incorporates environmentally advanced technology and enables OUC to diversify its fuel mix while adding more flexibility to OUC's portfolio of owned generation and purchased power. As its newest generating asset, Stanton B further contributes to OUC's environmentally responsible portfolio of generating resources.

This superior environmental performance not only preserves the environment, but also results in many economic benefits, which help offset the costs associated with the superior environmental performance. For example, the high quality coal burned at Stanton contributes to the high availability of the units as well as their low heat rates. Additionally, OUC has installed natural gas igniters for both Stanton 1 and Stanton 2, eliminating the use of No. 6 fuel oil and reducing the amount of coal burned during operations when economical to do so. This allows OUC to dial down the units to low as 90 MW each. For reference, most coal units are only able to operate at minimum loads around 50 to 60 percent of the maximum capability rating, however the Stanton coal units are able to operate as low as 20 percent of maximum capability.

Further demonstrating its environmental commitment to clean air, OUC has signed a contract to burn the methane gas collected from the Orange County landfill adjacent to Stanton Energy Center and John Drury Landfill. Methane gas, when released into the atmosphere, is considered to be 20 times worse than carbon dioxide in terms of possible global warming effects. Stanton 1 and Stanton 2 both have the capability of burning methane.

OUC has also voluntarily implemented a product substitution program not only to protect workers' health and safety but also to minimize hazardous waste generation and to prevent environmental impacts. The Environmental Affairs and the Safety Divisions constantly review and replace products to eliminate the use of hazardous substances. To further prevent pollution and reduce waste generation, OUC also reuses and recycles many products.

3.5.1 Emphasis on Sustainability

OUC completed its first greenhouse gas inventory for the entire company in 2008 and updates the inventory annually. This report helps OUC analyze how it impacts the environment, detailing both operating emissions and ways to reduce greenhouse gases. The greenhouse gas inventory was only a part of a larger initiative to perform a comprehensive sustainability audit of every department in the company. The goal of this effort is to understand both short-term and long-term opportunities to reduce the corporate carbon footprint in all departments and business functions. A comprehensive sustainability audit was completed in 2009 and will serve as a guide to help OUC develop new environmental initiatives.

OUC's commitment to efficiency and sustainability is further demonstrated by the completion of Reliable Plaza, OUC's energy and water efficient center in south downtown which replaces OUC's previous South Orange Avenue home. OUC's Reliable Plaza has earned Gold Leadership in Energy and Environmental Design (LEED) certification, officially cementing the 10-story administration and customer service center as the "Greenest Building in downtown Orlando." The non-profit U.S. Green Building Council awarded the Gold level certification after completing a review of the building's design and construction. Reliable Plaza also holds a Florida Water Star certification, a voluntary program for new and existing construction that encourages water efficiency in appliances plumbing fixtures, irrigation systems and landscapes. Reliable Plaza showcases a number of

environmentally friendly features and uses 28 percent less energy and 40 percent less water than a similarly sized facility.

OUC is number 1 for the 17th straight year for electric distribution and reliability compared to all Florida investor- owned utilities according to data submitted to the Public Service Commission. This is one reason why OUC was presented the Expanding Excellence Award for Innovation in Customer Service from CS Week and Electric Light & Power Magazine. This award was given for the commitment to continued improvement and Florida's first electric meter farm.

3.6 COMMUNITY RELATIONS, CONNECTING OUR CUSTOMERS AND ECONOMIC DEVELOPMENT

3.6.1 Community Relations

As Orlando's hometown utility, OUC is committed to helping the community in many ways. Whether through board involvement, support or employee volunteerism, individuals and organizations know they can rely on the utility when it matters most. OUC supports more than 400 non-profit and business-based organizations and participates each year in about 150 events while volunteering 10,000 hours in the community.

Through strategic community partnerships outlined below, OUC's commitment to sustainability can be seen all around town, with a unique solar sculpture at the Citrus Bowl and solar cell phone charging stations at LYNX bus shelters. OUC set out to make Orlando one of the most electric vehicle (EV)-friendly cities in the nation and installed more than 140 EV charging stations in its service area which helps erase range anxiety.

OUC supports a diverse group of business chambers in its service territory, including the Orlando Chamber, St. Cloud Chamber and Hispanic, African-American, Asian, Caribbean, Disability and LGBT chambers. It is also actively involved with economic gardening organizations such as GrowFL, National Entrepreneur Center, Hispanic Business Initiative Fund (HBIF), Black Business Investment Fund, Athena and technical associations. OUC helped power iSummit Orlando, a collective of tech experts, entrepreneurs, and tech industry leaders fueling the explosion of high-tech startups in the region.

3.6.1.1 Utility and Community Volunteerism

OUC launched Project Care, its utility assistance fund, in 1994. The program is managed by United Way 2-1-1 in order to provide rapid response to customers in need. Case management is also offered, as well as home energy audits to help individuals become more energy efficient. OUC participated in Project Care to help raise thousands of dollars each year for United Way 2-1-1, a local, non-profit organization. Since its inception, Project Care has raised more than $2 million, helping fund more than 18,000 households and thousands of families and individuals. For every $1 donated, OUC contributes $2 to the program. In addition, the Proud Volunteer program encourages and rewards employees for their volunteer work in the community. Employees volunteer more than 10,000 hours every year and help support a variety of non-profit organizations in the community. The annual OUC Charity Golf Tournament also has raised more than $610,000 for more than 30 Central Florida non-profits since its inception in 1995.

3.6.1.2 Water Color Project

For the tenth year in a row, OUC hosted the Water Color Project, a conservation-themed art program that encourages students to showcase the importance of saving water through their artwork. More than 2,700 students from 29 schools have competed to have their artwork featured in an annual calendar, while middle and high school students decorate rain barrels and calendars that become a traveling exhibit that is displayed throughout the community.

3.6.1.3 Project A.W.E.S.O.M.E.

OUC and the Orlando Science Center deliver energy and water conservation workshops to every fifth grader in OUC's service territory via Project A.W.E.S.O.M.E. (Alternative Water & Energy Supply; Observation, Methods & Education). The educational program promotes both water and energy conservation through a hands-on curriculum using content approved by OUC that meets Sunshine State Standards. Projects include allowing students to make an aquifer, build a solar-powered car, and test low flow showerheads and compact fluorescent light bulbs (CFLs) against traditional fixtures as part of an electric and water conservation and alternative sources educational program. Project A.W.E.S.O.M.E., which launched in 2009, delivers two 90-minute classroom workshops as well as hands-on labs and pre and post classroom activities—energy in the fall and water in the spring—to students in support of their Science FCAT preparation. More than 40,000 students have gone through the curriculum.

3.6.1.4 Spring into Sustainability Meetings

OUC partners with the cities of Orlando and St. Cloud to provide neighborhood meetings to connect with residents on programs and services designed to help them become more sustainable. In the inaugural year, these meetings had more than 300 participants and provided information on OUC's Usage Dashboard, Orlando's One Person, One Tree program, along with OUC's Power Pass and Home Warranty Protection Programs.

3.6.1.5 Strategic Partnerships Promote Awareness

OUC has leveraged highly-visible, professional sports partnerships to showcase OUC's commitment to sustainability and high-impact economic development efforts.

In 2010, after assisting with the energy and water efficiency features in the design phase of the Orlando Magic's LEED certified home, Amway Center, OUC has continued its green partnership with the NBA team, including promotion of the facility's LEED certification and its energy and water efficiency features through highly-visible educational signage and on-going digital.

The Magic partnership served as a model for OUC's agreement with The United States Tennis Association (USTA). Scheduled to open in early 2017, the new Home of American Tennis in Lake Nona will meet LEED certification standards. OUC is exclusively designated as the "Official Sustainability & Utility Sponsor" and will showcase savings that can be achieved through initiatives such as electric vehicle charging stations, hydration stations, mobile device charging stations and solar arrays on the roofs of shade pavilions. The new facility will bring more than one hundred and fifty high wage jobs to the community and will attract 100,000 unique visitors per year.

In 2015, OUC became the exclusive electric, water and sustainability utility partner for Orlando City Soccer Club. With the club's new MLS soccer stadium underway, OUC will have the opportunity to brand all water fountains and use this high-profile facility to showcase the savings that can be achieved through sustainability initiatives. Both permanent and transitional signage highlighting the energy and water efficiency features will be incorporated into the facility along with OUC's role in helping it achieve LEED certification. In addition, a solar sculpture will be installed to demonstrate sustainability and clean energy features at the stadium.

3.6.2 Connection Customers

From providing better online access to their consumption history to designing convenient and effective conservation programs, OUC arms customers with the information and tools they need to optimize the efficiency of their homes and businesses. This includes the community outreach previously discussed in this report as well a mix of new technologies and programs designed to provide customers with the information, control and options they desire.

3.6.2.1 Self-Service Options

OUC's informational website, self-service portal and automated phone system – which see about 70 percent of total customer transactions – are used by nearly 100,000 customers each month. Customers are able to find tips, videos on ways to save, as well as Frequently Asked Questions regarding their services. Through their myOUC online profile, they are able to pay their bills, make service requests, request payment extensions and more. The recent roll-out of the usage dashboard and OUC Power Pass program continued to drive adoption of the website. The site is mobile-friendly and accessible from a range of devices including tablets and smartphones.

3.6.2.2 Traditional Media and Digital Outreach

To reach the desired audience, OUC implements comprehensive, integrated media campaigns that utilize print, online, television, radio, social, outdoor media and community partnerships. By diversifying and targeting media, OUC is able to effectively reach the right customer with the right message. Campaigns cover a range of topics from safety to storm prep to sustainability. These campaigns reinforce OUC's commitment to showing customers how to reduce their energy and water use and ultimately their utility bills while promoting programs and initiatives important to the community.

3.6.2.3 Connections

Connections is a monthly newsletter sent to all OUC customers whether they receive a paper statement or e-bill. The Connections newsletters are also posted on http://www.OUC.com and feature information on OUC's programs, events and energy and water saving tips. A sample Connections newsletter is included in Appendix A of this report.

3.6.2.4 Social Media

Facebook, Twitter and YouTube allow OUC to update customers about the Commission's community involvement, as well as provide them with conservation tips, outage and restoration updates, and other need-to-know, real-time information that may affect them. Social media platforms also serve as additional customer service outlets, allowing for customers to quickly notify OUC about issues needing quick resolution, and provide additional opportunities for the Commission to build interactive relationships with customers and potentially diffuse negative situations.

3.6.2.5 Digital Meters

OUC's entire service area was upgraded with nearly 370,000 digital electric and water meters. The digital meters are easier to read and provide detailed information about customers' daily energy and water use. Meters are able to be monitored remotely which reduces costs and time while ensuring an accurate and timely reading for the customer. Remote monitoring also allows for OUC to better predict and prevent outages and restore power faster. OUC has created Florida's first meter farm consisting of 120 electric meters and 4 water meters at its Pershing Facility. The farm provides information and tells OUC exactly how updates are installed and ensure the meters are working correctly.

3.6.2.6 OUC Power Pass Program

OUC Power Pass is a program that allows customers to pay-as-you-go or pay in advance for utility services allowing the option of avoiding deposits, late fees and a monthly bill. Statistics have shown that pay-before-consumption programs result in less electricity usage and water because customers are more aware of how much they are using. Customers can check on their electric bill or water usage every day using the OUC Power Pass portal or receive alerts via text, email and/or phone.

3.6.2.7 Usage Dashboard

Digital meter technology allows customers to monitor electric consumption on an hourly basis and water on a daily basis instead of waiting until the end of the month to receive their bills. The ability to see usage patterns and make adjustments to lower energy bills was one of the items most frequently requested by OUC customers. To accommodate their needs, OUC released the OUC Usage Dashboard to most residential customers through their myOUC online profile. Because the new system also provides high-consumption alerts via email, changes in usage can be made immediately, and costs can be kept in check.

3.6.2.8 Online Rebate Application

In 2015, the Sustainability Department launched a new online rebate application tool that allows customers to apply for savings without the hassle of paperwork. It creates convenience for customers, reduces transaction times, and has almost completely ended the use of paper and mail for this type of service. Customers are able to access the tool through their myOUC online profile. The new system also streamlines internal work and provides more detailed reports on program enrollment and savings.

3.6.2.9 Project Momentum

OUC is upgrading its customer information system from PeopleSoft Enterprise Risk Management to Customer Care & Billing to improve the quality experience for all levels of customers. OUC is undertaking this major initiative to lay the foundation for future enhancements and new technologies. This complex endeavor must take into account other affected systems such as Outage Management, Meter Data Management, Enterprise 1, Geographic Information System, the Web and Interactive Voice Response. Kicked off in January 2015 and slated for completion in 2016, Project Momentum requires 100-plus employees from 17 OUC departments and partner contractors to understand and work through hundreds of business processes and thousands of data points. Delivering an improved quality experience for customers is a primary goal of OUC's Strategic Plan.

3.6.3 Economic Development

Orlando has undergone a radical transformation over the years in order to diversify its economy and attract high wage positions in technology, medicine, life sciences, and modeling and simulation. With Orlando's increasing emphasis on recruiting, retaining and expanding commercial customers, OUC has become a major player in the region's economic development. Working in partnership with Enterprise Florida, the Metro Orlando Economic Development Commission, and city and county governments, the utility is attracting more companies to Orlando and St. Cloud and helping them grow into vital and valuable members of the business community.

In 2014, OUC adopted two new rate riders – in line with those offered by other utilities in the region – aimed at attracting large businesses that will enhance the vitality of the community. For large power users who qualify, OUC is able to negotiate its already-affordable rates in order to fit their business needs. The Economic Development Rider (EDR) is available to new or expanding

businesses representing select target industries. Companies must add a minimum of 500-kW demand of new electric load and must create at least 25 new jobs at or above the 150% median income level to qualify. The Commercial Industrial Service Rider (CISR) is available to companies that have minimum load of 2,000 kW or greater, served by a single meter. Companies must provide validation of a lower rate offering outside OUC's service territory to qualify.

The details of these rates and other incentives are outlined at www.oucpowersgrowth.com – a new website that was launched in 2015 to help site selectors and businesses seeking to locate and learn more about Orlando and OUC. The site includes property search functionality and is mobile-friendly.

4.0 Forecast of Peak Demand and Energy Consumption

OUC prepares a set of sales, energy, and demand forecast models each year to support OUC's budgeting and financial planning process as well as long-term planning requirements. In preparing the forecasts OUC uses internal records, company knowledge of the service territory and customers, and economic projections. OUC draws on outside expertise as needed. The economic projection data is provided by Moody's Economy.Com and Itron provides forecasting software, analysis of end-use equipment and efficiencies, and technical expertise.

4.1 FORECAST METHODOLOGY

OUC has adopted a "Statistically Adjusted End-Use" (SAE) modeling technique. This approach entails specifying end-use variables (xHeat for heating, xCool for cooling, and xOther for other use) and utilizing these variables in sales multi-regression models. SAE variables allow anticipated shifts in customer end use consumption driven by the type and efficiency of heating and cooling equipment, appliances, and other load devices to be represented along with econometric drivers in the forecast models. The SAE approach was developed by Itron. Itron reviews OUC's application of these techniques and provides data on heating, cooling, and other end-use load trends. These techniques are used to develop the forecasts for both the OUC and St. Cloud service territories.

1.1.1 Residential

The residential model consists of both a customer forecast model and an average use per customer model. Monthly average use models were estimated using actual data for the period 2004 to 2015. This provides 12 years of historical data and enough observations to estimate strong regression models. Once models showing the number of expected customers and the expected average use per customer are developed, the projected residential sales by year (y) and month (m) are calculated as the product of the customer and average use forecasts:

$$Residential\ Sales_{y,m} = Customers_{y,m} \times Average\ Usage_{y,m}$$

4.1.1.1 Residential Customer Forecast

Residential customers are forecast as a function of household growth for the Orlando SMSA. There is a strong correlation (R^2 of 0.99 for "inside" the City of Orlando and 0.95 for outside the City) between historical changes in customers and historical changes in the Orlando SMSA household growth. Approximately 71 percent of OUC's residential customers are "inside" the City. The multi-regression model for residential customers is represented as:

$$Customers_{y,m} = \beta_0 + \beta_1\left(Households_{y,m}\right)$$

The coefficients (β) are outputs of the multi-regression models

4.1.1.2 Average Use Forecast

The residential forecast models utilize multi-regression modeling made up of three major components:

1. Changes in the economy, such as median household income, household size, and the price of electricity
2. End-use equipment index variables, which captures the long-term net effect of equipment saturation and equipment efficiency improvements
3. Weather variables, which serve to allocate the seasonal impacts of weather throughout the year.

The SAE model framework begins by defining energy use for an average customer in year (y) and month (m) as the sum of energy used by heating equipment (xHeat $_{y, m}$), cooling equipment (xCool $_{y, m}$), and other equipment (xOther $_{y, m}$). The xHeat, xCool and xOther variables are defined as a product of an annual equipment index and a monthly usage multiplier. This model is represented as:

$$Average\ Usage_{y,m} = \beta_1(xHeat_{y,m}) + \beta_2(xCool_{y,m}) + \beta_3(xOther_{y,m})$$

Where:
$xHeat_{y,m} = Economics_{y,m} \times HeatingEqup_y \times HDD\_Index_{y,m}$
$xCool_{y,m} = Economics_{y,m} \times CoolingEqup_y \times CDD\_Index_{y,m}$
$xOther_{y,m} = Economics_{y,m} \times OtherEqup_{y,m}$

A customer's monthly usage level is impacted by several economic factors, including the price of electricity, household size, and income levels.

$$Economics_{y,m} = \left(\frac{Price_{y,m}}{Price_{base\ y}}\right)^{-0.1} \times \left(\frac{HH\ Size_{y,m}}{HH\ Size_{base\ y,m}}\right)^{0.2} \times \left(\frac{HH\ Income_{y,m}}{HH\ Income_{base\ y,m}}\right)^{0.2}$$

The annual equipment variables (HeatEquip, CoolEquip, OtherEquip) are defined as a weighted average across equipment types multiplied by equipment saturation levels normalized by operating efficiency levels.

$$HeatEquip_y = \sum_{tech} Weight \times \left(\frac{Saturation_y / Efficieny_y}{Saturation_{base\ y} / Efficieny_{base\ y}}\right)$$

$$CoolEquip_y = \sum_{tech} Weight \times \left(\frac{Saturation_y / Efficieny_y}{Saturation_{base\ y} / Efficieny_{base\ y}}\right)$$

$$OtherEquip_y = \sum_{tech} Weight \times \left(\frac{Saturation_y / Efficieny_y}{Saturation_{base\ y} / Efficieny_{base\ y}}\right)$$

The following degree day index variables serve to allocate the seasonal impacts of weather throughout the year. For historic periods actual HDD's and CDD's are used. Normal HDD's and CDD's are used for forecast periods.

$$HDD\_Index_{y,m} = \frac{HDD_{y,m}}{Normal\ HDD_y}$$

$$CDD\_Index_{y,m} = \frac{CDD_{y,m}}{Normal\ CDD_y}$$

4.1.2 Non-Residential

4.1.2.1 General Service Non-Demand (GSND)

The General Service Non-Demand (GSND) and General Service Demand Secondary (GSD Secondary) classes are modeled as a combined General Service Secondary class (GS Secondary) using a single model because the historic data indicates customer migration has occurred back and forth between the two classes. The result is a single model which produces predicted values with a higher correlation than that of two separate models. The forecast is later split between GSND and GSD Secondary using the monthly relationships between the two classes in 2015.

The framework for the GS secondary class model is similar to the residential model. It also has three major components and utilizes the SAE model framework. The differences lie in modeling total sales versus use per customer, the type of end-use equipment, and the economic variables used. The end-use equipment variables are based on commercial appliance / equipment saturation and efficiency projections. The economic drivers in the model are the commercial price of electricity and the Gross Metro Product for the Orlando SMSA. The third component is the weather variable. HDD is not used in the GS Secondary model because no statistically valid correlation between heating days and sales could be identified. The GS Secondary class model uses CDD as the weather variable. The growth in residential customers is brought into the GS secondary model because growth in the residential sector is seen as a driver for the commercial sector.

The GS Secondary model is represented as:

$$GS\ Secondary\ Sales_{y,m} = \beta_0 + \beta_1(xCool_{y,m}) + \beta_2(xOther_{y,m}) + \beta_3(ResCust_{y,m})$$

Sales to six large GSD Secondary customers are excluded from the GS Secondary model discussed above. These six large customers are forecast individually using a combination of SAE techniques, individual customer trending, and customer specific planning input. These six customers represent approximately 5 percent of OUC's total load and 10 percent of the GS Secondary Load. They are handled individually because each has identifiable growth plans or patterns and each individually represents a significant load.

4.1.2.2 General Service Demand (GSD)

Forecasted sales to GSD Secondary customers were modeled as discussed above. In addition to the customers taking service at secondary voltage, OUC serves nineteen locations at primary voltage. Of those nineteen, thirteen are modeled as a group because they have exhibited a consistent load pattern over time. Collectively their load is forecast using an exponential smoothing model which incorporates the seasonality of their load. This group of customers represents about 17 percent of the GSD Primary sales.

The six remaining primary customers are forecast individually using a combination of techniques which includes regression modeling, individual customer trending, and customer specific planning input. These six customers represent approximately 7 percent of OUC's total load and 83 percent of the GSD Primary sales.

Sales from the various GSD models are summed to complete the GSD forecast.

$$GSD\ Sales_{y,m} = GSD\ Secondary\ Sales_{y,m} + GSD\ Primary\ Sales_{y,m}$$

4.1.2.3 Streetlights

Private and Public lighting consumption is forecast separately. Both classes are not impacted by the weather, and the SAE modeling approach does not apply. Therefore, simple exponential smoothing models with a linear trend are used to generate both forecasts. The forecast for public streetlights reflects the planned schedule for replacement of traditional HPS fixtures with LED fixtures.

4.1.2.4 OUC Use

OUC Use sales are those to OUC Water Plants, OUCooling Plants, and OUC facilities. The OUC Use models utilize CDD, but not HDD or the factors included in the "Other" SAE modeling variable. Binary variables have been inserted in the multi-regression model coinciding with operations date for the three OUC Cooling Plants commissioned in the past 10-years.

$$\text{Sales}_{y,m} = \beta_0 + \beta_1(\text{xCool}_{y,m}) + \beta_2(\text{Jun\_2005\_Plus}_{y,m}) + \beta_3(\text{Jun\_2008\_Plus}_{y,m}) + \beta_4(\text{Jun\_2010\_Plus}_{y,m})$$

4.1.3 Hourly Load and Peak Forecast

The monthly net energy for load (NEL) is estimated for OUC and St. Cloud based on the respective sales forecasts described above and the expected line loss factors. The system 8,760 hourly load forecast is generated using the software package *MetrixLT*. Within MetrixLT the monthly NEL forecast is allocated to each hour based on the weather normal hourly energy profile. The hourly load forecasts for OUC and St. Cloud are then combined to generate a total system hourly load forecast. Summer and winter peak demands are then extracted from the combined total system hourly load forecast.

4.2 BASE CASE FORECAST ASSUMPTIONS

Incorporated into the forecast models are set of underlying economic and demographic, price of electricity, and weather assumptions.

4.2.1 Economics & Demographics

The economic and demographic assumptions are derived from forecasts for the Orlando SMSA by Economy.Com.

4.2.1.1 Median Household Income

The residential forecast model uses the Median Household Income which is forecast to grow at an average annual rate of 0.4 percent (in fixed 2008 dollars) over the period 2016-2026 as shown in Table 4-1.

4.2.1.2 Gross Metro Product

The non-residential forecast models use Orlando SMSA Gross Metro Product. The Gross Metro Product for the Orlando SMSA is forecast to grow at an average annual rate of 4.7 percent over the ten-year period 2016 - 2026. Gross Metro Product is shown in Table 4-1.

Table 4-1 Economic & Demographic Projections – Orlando SMSA

YEAR	MEDIAN HOUSEHOLD INCOME	GROSS METRO PRODUCT $ BILLIONS	HOUSEHOLDS (THOUSANDS)	POPULATION (THOUSANDS)
2016	$46,385	121.7	963.8	2,469.8
2017	$47,120	129.3	1,004.3	2,549.3
2026	$50,732	191.7	1,348.9	3,320.8
2031	$52,555	230.5	1,542.2	3,756.8
Average Annual Increase				
16-21	0.1.0%	4.2%	3.1%	2.6%
16-26	0.9%	4.7%	3.4%	3.0%
26-31	0.8%	4.4%	3.2%	2.8%

4.2.1.3 Households and Population

The primary demographic drivers in the residential forecast model are the number of households and the population (see Table 4-1). Households are used in the residential customer forecast model. The population data is divided by the household data to determine household size used in the residential average use forecast model.

4.2.2 Price of Electricity

The nominal price of electricity by customer class is forecast to increase at the same rate as inflation resulting in essentially no change to the real price of electricity. The real price of electricity by customer class is used in the residential and non-residential forecast models.

4.2.3 Weather

Weather is a key factor affecting electricity consumption for indoor cooling and heating. Monthly cooling degree days (CDDs) are used to capture cooling requirements while heating degree days (HDDs) account for variation in usage because of electric heating needs. CDDs and HDDs are calculated from the daily average temperatures as reported by the National Weather Service for the weather station at the Orlando International Airport. CDD is calculated using a 65° F base temperature as follows:

$$CDD_d = (Avg\ Temp_d - 65°\ F)\ when\ Avg\ Temp_d \geq 65$$

The daily CDD values are then aggregated to yield a monthly CDD for each year as follows:

$$CDD_{y,m} = \sum CDD_{y,m,d}$$

Heating degree days are calculated in a similar manner use a base temperature of 65° F as follows:

$$HDD_d = (65°\ F - Avg\ Temp_d)\ when\ Avg\ Temp_d \leq 65$$

The daily HDD values are then aggregated to yield a monthly HDD for each year as follows:

$$HDD_{y,m} = \sum HDD_{y,m,d}$$

"Normal" monthly weather is assumed to be the median of the monthly degree days during the most recent 30-year period (1985 – 2014).

4.3 BASE CASE LOAD FORECAST

A long-term annual budget forecast was developed through 2031 using the methodology and base case assumptions outlined above.

4.3.1 Customer and Sales Forecast Results

Total retail sales for OUC are expected to increase from 5,893 GWh in calendar year 2015 to 6,707 GWh by 2026. St. Cloud sales are projected to increase from 627 GWh to 809 GWh over this same time period. Shown in Table 4-2 through
Table 4-5 are the annual customer and sales forecasts for OUC and St. Cloud.

4.3.1.1 Residential Forecast

With increasing appliance efficiency, increased customer conservation, and declining household size average use per residential customer is projected to decline over the forecast period 2016 through 2026. The number of residential customers is expected to increase at an average annual rate of 2.7 percent for OUC and at 3.3 percent for St. Cloud for the next ten years. The ten-year residential sales average annual growth rate is 2.4 percent for OUC and 3.1 percent for St. Cloud.

4.3.1.2 GSND Forecast

GSND sales are projected to grow at an average annual rate of 0.9 percent and 1.1 percent for OUC and St. Cloud, respectively, between 2016 and 2026. The number of GSND customers is projected to grow at an average annual growth rate of 2.9 percent and 3.2 percent respectively, for OUC and St. Cloud from 2016 through 2026.

4.3.1.3 GSD Forecast

GSD is comprised of large commercial and industrial customers. Sales are projected to show solid gains as a result of new major commercial development such as the UCF medical school, Burnham Institute, VA hospital, and other related medical businesses coming on line.

Table 4-2 OUC Long-Term Sales Forecast (GWh)

YEAR	RESIDENTIAL	GSND	GSD	LIGHTING	OUC USE	TOTAL RETAIL
2016	1,926	347	3,365	53	133	5,824
2021	2,185	363	3,554	56	134	6,292
2026	2,445	379	3,682	67	134	6,707
2031	2,728	396	3,823	78	136	7,161
Average Annual Increase						
16-21	2.6%	0.9%	1.1%	1.4%	0.2%	1.6%
16-21	2.4%	0.9%	0.9%	2.5%	0.1%	1.4%
13-31	2.3%	0.9%	0.9%	2.7%	0.1%	1.4%

Table 4-3 OUC Average Number of Customers Forecast

YEAR	RESIDENTIAL	GSND	GSD	TOTAL RETAIL
2016	170,184	21,164	5,527	196,876
2021	196,781	24,792	6,471	228,043
2026	222,171	28,254	7,371	257,796
2031	248,271	31,824	8,296	288,381
Average Annual Increase				
16-21	2.9%	3.2%	3.2%	3.0%
16-26	2.7%	2.9%	2.9%	2.7%
16-31	2.5%	2.8%	2.7%	2.6%

Table 4-4 St. Cloud Long-Term Sales Forecast (GWh)

YEAR	RESIDENTIAL	GSND	GSD	LIGHTING	TOTAL RETAIL
2016	455	41	128	3	627
2021	537	44	136	3	720
2026	618	46	143	3	809
2031	704	48	149	3	904
Average Annual Increase					
16-21	3.4%	1.3%	1.3%	0.2%	2.8%
16-26	3.1%	1.1%	1.1%	0.1%	2.6%
16-31	3.0%	1.0%	1.0%	0.1%	2.5%

Table 4-5 St. Cloud Average Number of Customers Forecast

YEAR	RESIDENTIAL	GSND	GSD	TOTAL RETAIL
2016	32,089	3,070	367	35,526
2021	38,456	3,644	435	42,534
2026	44,534	4,193	499	49,226
2031	50,781	4,757	566	56,104
Average Annual Increase				
16-21	3.7%	3.5%	3.4%	3.7%
16-26	3.3%	3.2%	3.1%	3.3%
13-31	3.1%	3.0%	2.9 %	3.1%

4.3.2 Forecast Net Peak Demand and Net Energy for Load

Underlying hourly load growth is driven by the aggregate energy forecast. Thus, forecasted peaks grow at roughly the same rate as the energy forecast. Shown in Table 4-6 through

Table 4-8 are the seasonal peak demand and net energy for load forecasts for OUC, St. Cloud, and the combined net system peak.

Table 4-6 OUC Forecast Net Peak Demand (Summer and Winter) and Net Energy for Load

YEAR	SUMMER (MW)	WINTER (MW)	NET ENERGY (GWH)
2016	1,160	1,006	6,063
2021	1,256	1,086	6,550
2026	1,339	1,160	6,982
2031	1,429	1,236	7,454
Average Annual Increase			
16-21	1.6%	1.6%	1.6%
16-26	1.4%	1.4%	1.4%
16-31	1.4%	1.4%	1.4%

Table 4-7 St. Cloud Forecast Net Peak Demand (Summer and Winter) and Net Energy for Load

YEAR	SUMMER (MW)	WINTER (MW)	NET ENERGY (GWH)
2016	165	155	665
2021	188	178	763
2026	211	200	858
2031	236	222	959
Average Annual Increase			
16-21	2.7%	2.9%	2.8%
16-26	2.5%	2.6%	2.6%
16-31	2.4%	2.5%	2.5%

Table 4-8 Net System Peak (Summer and Winter) and Net Energy for Load (Total of OUC and St. Cloud)

YEAR	SUMMER (MW)	WINTER (MW)	NET ENERGY (GWH)
2016	1,324	1,160	6,727
2021	1,444	1,265	7,313
2026	1,545	1,360	7,840
2031	1,665	1,458	8,412
Average Annual Increase			
16-21	1.8%	1.7%	1.7%
16-26	1.6%	1.6%	1.5%
16-31	1.5%	1.5%	1.5%

4.4 HIGH AND LOW LOAD SCENARIOS

In addition to the base case, two long-term forecast scenarios representing a high range and low range around the peak demand forecast were constructed. The high and low forecast scenarios are based on bands around the most likely household forecast for the Orlando SMSA. The average annual household growth rate in the base case is 3.4 percent for the period 2016 - 2026. In the high case scenario, households are forecasted to increase at 4.4 percent annually for the same time period. The high growth scenario results in a forecasted average annual energy growth rate of 2.2 percent, with a 2026 system peak demand that is 148 MW higher than the base case.. In the low case scenario, the households are forecasted to increase at 2.4 percent annually resulting in average annual energy increases of 1.1 percent over the 2016-2026 period. The 2026 low case peak demand is 118 MW lower than the base case. Table 4-9 presents a summary of the high and low load scenarios.

Table 4-9 Scenario Peak Forecasts OUC and St. Cloud

HIGH LOAD SCENARIO			
Year	Summer (MW)	Winter (MW)	Net Energy (GWh)
2016	1,361	1,207	6,902
2021	1,523	1,336	7,714
2026	1,693	1,473	8,569
2031	1,883	1,624	9,519
Average Annual Increase			
16-21	2.3%	2.1%	2.2%
16-26	2.2%	2.0%	2.2%
16-31	2.2%	2.0%	2.2%
LOW LOAD SCENARIO			
2016	1,282	1,144	6,510
2021	1,361	1,208	6,907
2026	1,427	1,260	7,236
2031	1,488	1,308	7,539
Average Annual Increase			
16-21	1.2%	1.1%	1.2%
16-21	1.1%	1.0%	1.1%
16-31	1.0%	0.9%	1.0%

5.0 Demand-Side Management

Sections 366.80 through 366.85, and 403.519, Florida Statutes (F.S.), are known collectively as the Florida Energy Efficiency and Conservation Act (FEECA). Section 366.82(2), F.S., requires the Florida Public Service Commission (PSC) to adopt appropriate goals designed to increase the conservation of expensive resources, such as petroleum fuels, to reduce and control the growth rates of electric consumption and weather-sensitive peak demand. Pursuant to Section 366.82(6), F.S., the PSC must review the conservation goals of each utility subject to FEECA at least every five years. The seven utilities subject to FEECA are Florida Power & Light Company (FPL), Progress Energy Florida, Inc. (PEF), Tampa Electric Company (TECO), Gulf Power Company (Gulf), Florida Public Utilities Company (FPUC), OUC, and JEA (referred to collectively as the FEECA utilities).

OUC's residential and commercial/industrial numeric conservation goals for the 2015 through 2024 period were established by the PSC pursuant to Order No. PSC-13-0645-PAA-EU. These PSC-established annual goals are presented in Tables 5-1, 5-2 and 5-3.

Table 5-1 Residential DSM Goals Approved by the PSC

CALENDAR YEAR	SUMMER (MW)	WINTER (MW)	ANNUAL (GWH)
2015	0.05	0.04	0.14
2016	0.08	0.08	0.30
2017	0.12	0.12	0.45
2018	0.16	0.16	0.60
2019	0.20	0.21	0.72
2020	0.21	0.21	0.77
2021	0.21	0.22	0.80
2022	0.19	0.20	0.72
2023	0.19	0.18	0.66
2024	0.16	0.16	0.57
Total	**1.57**	**1.58**	**5.73**

Table 5-2 Commercial/Industrial DSM Goals Approved by the PSC

CALENDAR YEAR	SUMMER (MW)	WINTER (MW)	ANNUAL (GWH)
2015	0.20	0.49	0.34
2016	0.28	0.57	0.50
2017	0.30	0.70	0.66
2018	0.36	0.70	0.75
2019	0.37	0.66	0.82
2020	0.39	0.70	0.85
2021	0.40	0.78	0.86
2022	0.37	0.78	0.85
2023	0.39	0.74	0.82
2024	0.36	0.70	0.80
Total	**3.42**	**6.82**	**7.25**

Table 5-3 Total Residential and Commercial/Industrial DSM Goals Approved by the PSC

CALENDAR YEAR	SUMMER (MW)	WINTER (MW)	ANNUAL (GWH)
2015	0.25	0.54	0.48
2016	0.36	0.65	0.80
2017	0.42	0.82	1.11
2018	0.52	0.82	1.35
2019	0.57	0.86	1.54
2020	0.60	0.91	1.62
2021	0.61	1.00	1.66
2022	0.56	0.98	1.56
2023	0.57	0.92	1.48
2024	0.52	0.86	1.37
Total	**4.98**	**8.36**	**12.97**

OUC has been increasingly emphasizing its DSM and conservation programs to increase customer awareness of such programs. Not only do these programs help customers save money by saving energy, the programs help OUC reduce emissions of greenhouse gases and better position OUC to meet possible future greenhouse gas regulations. It should be noted that government mandates have forced manufacturers to increase their efficiency standards, thereby decreasing the incremental amount of energy savings achievable. In addition, the efficiency of new generation has increased and natural gas prices have remained at or near historic lows for the last several years, and look to continue to do so for the near-future. These appliance and generating unit efficiency improvements, coupled with low natural gas prices, have mitigated to some degree the effectiveness of DSM and conservation programs, as the incremental benefit of such programs is partially offset by overall efficiency increases in the marketplace as a whole.

The quantifiable DSM and conservation programs that OUC included in its DSM Plan (filed with the PSC on March 16, 2015) and offered to its customers in 2015 include the following:

- Residential Home Energy Survey Program – Walk-Through, DVD, and On-Line
- Residential Duct Repair/Replacement Rebate Program
- Residential Ceiling Insulation Upgrade Rebate Program
- Residential Window Film/Solar Screen Rebate Program
- Residential High Performance Windows Rebate Program
- Residential Efficient Electric Heat Pump HVAC Rebate Program
- Residential New Home Rebate Program
- Residential Efficiency Delivered Program
- Commercial Energy Survey Program
- Commercial Efficient Electric Heat Pump HVAC Rebate Program
- Commercial Duct Repair/Replacement Rebate Program
- Commercial Window Film/Solar Screen Rebate Program
- Commercial Ceiling Insulation Rebate Program
- Commercial Cool/Reflective Roof Rebate Program

The remainder of this section describes each of the quantifiable DSM and conservation programs that OUC offered its customer in 2015. In addition to offering such programs, OUC continues to play an active role in promoting conservation through community relations as discussed in Section 2.4 and Section 3.6 of this Ten-Year Site Plan.

5.1 QUANTIFIABLE DSM AND CONSERVATION PROGRAMS

5.1.1 Residential Home Energy Survey Program

OUC has been offering home energy surveys dating back to the late 1970's. The home energy walk-through surveys were designed to provide residential customers with recommended energy efficiency measures and practices customers can implement. The Residential Energy Survey Program consists of three measures: the Residential Energy Walk-Through Survey, the Residential Energy Survey DVD, and an interactive Online Energy Survey. These measures are available to both single family and multi-family residential customers.

The Residential Energy Walk-Through Survey includes a complete examination of the attic; heating, ventilation, and air conditioning (HVAC) system; air duct and air returns; window caulking; weather stripping around doors; faucets and toilets; and lawn sprinkler systems. OUC provides participating customers specific tips on conserving electricity and water as well as details on customer rebate programs. OUC Conservation Specialists are using this walk-through type audit as a means of motivating OUC customers to participate in other conservation programs and qualify for appropriate rebates.

A Residential Energy Survey Video was first offered in 2000 by OUC and is now available to OUC customers in an interactive DVD format. The DVD is free and is distributed in English and Spanish to OUC customers by request. The DVD was developed to further assist OUC customers in surveying their homes for potential energy saving opportunities. The DVD walks the customer through a complete visual assessment of energy and water efficiency in his or her home. A checklist brochure to guide the customer through the audit accompanies the DVD. The DVD has several benefits over the walk-through survey, including the convenience of viewing the DVD at any time without a scheduled appointment and the ability to watch the DVD numerous times. In addition to the Energy Walk-Through and the DVD Surveys, OUC offers customers an interactive Online Home Energy Audit. The interactive Online Home Energy Audit is available on OUC's web sites at http://www.OUC.com.

One of the primary benefits of the Residential Energy Survey Program is the education it provides to customers on energy conservation measures and ways their lifestyle can directly affect their energy use. Customers participating in the Energy Survey Program are informed about conservation measures that they can implement. Customers will benefit from the increased efficiency in their homes, and decreased electric and water bills.

Participation in the Walk-Through Energy Survey has been consistently strong over the past several years and interest in the Energy Survey DVD, as well as the interactive Online Home Energy Audit, has been high since the measures were first introduced. Feedback from customers who have taken advantage of the surveys has been very positive.

The Home Energy Audit rates how efficient a customer's home energy use is and where one can make improvements to lower utility bills. Participation is tracked through service orders that are produced when appointments are scheduled and completed or the DVD is mailed. Online Surveys are tracked through the service provider (Apogee), who produces monthly activity reports.

5.1.2 Residential Duct Repair/Replacement Rebate Program

The Duct Repair Rebate Program originated in 2000 and is designed to encourage customers to repair leaking ducts on existing systems. Qualifying customers must have an existing central air conditioning system of 5.5 tons or less and ducts must be sealed with mastic and fabric tape or any other Underwriters Laboratory (UL) approved duct tape. Participating customers receive a rebate for 100 percent of the cost of duct repairs on their homes, up to $160.

Customers can participate by submitting a rebate application form available online at http://www.OUC.com. Proofs of purchase and/or receipts are required to be attached to the application and repairs can be performed by a contractor or the customer. Participation is tracked based on the number of rebates processed. Typically these rebates are credited on the customer's bill, or a check can be processed and sent to the property owner who may have paid for the improvement.

5.1.3 Residential Ceiling Insulation Upgrade Rebate Program

The attic is the easiest place to add insulation and lower total energy costs throughout the seasons. The Ceiling Insulation Rebate Program has been offered for several years and is designed to encourage customers to upgrade their attic insulation. Participating customers receive $0.05 per square foot for upgrading their attic insulation up to R-30. If the customer arranges an OUC pre-inspection and it is verified the existing insulation is R-11 or less, OUC will pay a rebate of $0.14 per square foot.

Customers can participate by submitting a rebate application form available online at http://www.OUC.com. Proofs of purchase and/or receipts are required to be attached to the application and repairs can be performed by a contractor or the customer. Participation is tracked based on the number of rebates processed. Typically these rebates are credited on the customer's bill, or a check can be processed and sent to the property owner who may have paid for the improvement.

5.1.4 Residential Window Film/Solar Screen Rebate Program

Installing solar window film on pre-existing homes can help reflect the heat during hot summer days and help the efficiency of home cooling units. The Window Film/Solar Screen Rebate Program has been offered for several years and is designed to encourage customers to install solar shading on their windows. Participating customers will receive a rebate in the amount of $1 per square foot for installation of solar shading film with a shading coefficient of 0.5 or less on east-, west, and south-facing windows.

Customers can participate by submitting a rebate application form available online at http://www.OUC.com. Proofs of purchase or receipts are required to be attached to the application and repairs can be performed by a contractor or the customer. Participation is tracked based on the number of rebates processed. Typically these rebates are credited on the customer's bill, or a check can be processed and sent to the property owner who may have paid for the improvement.

5.1.5 Residential High Performance Window Rebate Program

Energy-efficient windows can help minimize heating, cooling, and lighting costs. The High Performance Windows Rebate Program has been offered for several years and is designed to encourage customers to install windows that improve energy efficiency in their homes. Customers will receive a $2 rebate per square foot for the purchase of ENERGY STAR® rated energy efficient windows.

Customers can participate by submitting a rebate application form available online at http://www.OUC.com. Proofs of purchase and/or receipts are required to be attached to the application and repairs can be performed by a contractor or the customer. Participation is tracked based on the number of rebates processed. Typically these rebates are credited on the customer's bill, or a check can be processed and sent to the property owner who may have paid for the improvement.

5.1.6 Residential Efficient Electric Heat Pump HVAC Rebate Program

The Efficient Electric Heat Pump Rebate Program provides rebates to qualifying customers in existing homes who install heat pumps having a seasonal energy efficiency ratio (SEER) of 15.0 or higher. Customers will obtain a rebate in the form of a credit on their bill ranging from $80 to $1,275, depending upon the SEER rating and capacity (tons) of the new heat pump. The following table illustrates the incentives available depending on the size and efficiency of the Heat Pump installed.

Customers can participate by submitting a rebate application form available online at http://www.OUC.com. Proofs of purchase or receipts are required to be attached to the application, and work must be performed by a contractor. Participation is tracked based on the number of rebates processed. Typically these rebates are credited on the customer's bill or a check can be processed and sent to the property owner who may have paid for the improvement.

HEAT PUMP SIZE	HEAT PUMP SEER AND REBATE AMOUNT			
Tons	15	16	17	18
1	$80	$130	$175	$215
1 1/2	$145	$220	$290	$350
2	$205	$310	$400	$480
2 1/2	$270	$400	$515	$615
3	$335	$490	$625	$745
3 1/2	$395	$580	$735	$880
4	$460	$670	$850	$1,010
4 1/2	$525	$755	$960	$1,145
5	$590	$845	$1,075	$1,275

Customers can participate by submitting a rebate application form available online at http://www.OUC.com. Proofs of purchase or receipts are required to be attached to the application, and work must be performed by a contractor. Participation is tracked based on the number of rebates processed. Typically these rebates are credited on the customer's bill or a check can be processed and sent to the property owner who may have paid for the improvement.

5.1.7 Residential New Home Rebate Program

Previously named The Residential Gold Ring Home Program, the program has been transformed into a more flexible "a la carte" program offering a variety of choices for the Builder or Home buyer. This transformation was based on feedback OUC received from the residential building community in order to increase the level of participation in OUC's program. The chart below reflects an example of the incentives available.

REBATE	RATE OF REBATE	SQUARE FOOTAGE	TOTAL
Cool/Reflective Roof	$0.04 per sq. ft	2,000	$80
Block Wall Insulation	$0.16 per sq. ft	1,100	$176
Ceiling Insulation Upgrade to R-38	$0.04 per sq. ft	2,000	$80
Heat Pump	up to $1,275	2,000	*$460
Energy Star® WashingMachine	$100	N/A	$100
Energy Star® Heat Pump Water Heater	$650	N/A	$650
Solar Water Heater	$1000	N/A	$1,000

**Based on a typical HVAC Heat Pump size for a 2000 square foot home of 4 tons with a 15 SEER efficiency. Refer to Heat Pump rebate chart for other details.*

5.1.8 Residential Efficiency Delivered Program

What was once referred to as the Home Energy Fix-Up Program has now been revamped and expanded to allow for any OUC customer both energy and water to participate and renamed the Efficiency Delivered program. The program is available to residential customers (single family homes) and provides up to $2,000 of energy and water efficiency upgrades based on the needs of the customer's home. A Conservation Specialist from OUC performs a survey at the home and determines which home improvements have the potential of saving the customer the most money. The program is an income based program which is the basis for how much OUC will help contribute toward the cost of improvements and consists of three household income tiers:

HOUSEHOLD INCOME	OUC CONTRIBUTION
Less than $40,000	85% (not to exceed $1,700)
$40,001–$60,000	50% (not to exceed $1,000)
Greater than $60,000	Rebates only

- $40,000 or less OUC will contribute 85 percent of the total cost,
- $40,001 to $60,000 OUC will contribute 50 percent of the total cost,
- greater than $60,000 OUC will contribute the rebate incentives that apply toward the total cost.

Each customer must request and complete a free Residential Energy Survey. Ordinarily, Energy Survey recommendations require a customer to spend money replacing or adding energy conservation measures: however, customers may not have the discretionary income to implement these measures especially those in the lower income tier. Under this program, OUC will arrange for

a licensed, approved contractor to perform the necessary repairs based on a negotiated and contracted rate. The remaining portion of the cost the customer is responsible for can be paid directly to OUC or over an interest-free 12-month period on the participant's monthly electric bill. To be eligible for this program, the customer's account must be in good credit standing with the exception of our low-income customers who are only required to have a current balance. Some of the improvements covered under this program include ceiling insulation, duct system repair, pipe insulation, window film, window caulk, door caulk, door weather stripping, door sweep, threshold plate, air filter replacement, toilet replacement, irrigation repairs, water flow restrictors and minor plumbing repairs.

The purpose of the program is to reduce the energy and water costs especially for low-income households, particularly those households with elderly persons, disabled persons and children. Through this program, OUC helps to lower the bills of customers who may have difficulty paying their bills, thereby decreasing the potential for costly service disconnect fees and late charges. OUC believes that this program will help customers afford other essential living expenses. For others, this program offers a one-stop-shop to facilitate the implementation of a whole suite of conservation measures at reasonable costs and pre-screened qualified contractors.

Efficiency Delivered contractor(s) are selected through a Request For Proposal (RFP) process on a routine basis. Eligible customers are referred to the participating contractor after the OUC Conservation Specialist inspection is complete. The Efficiency Delivered contractor then inspects the home and creates a proposal to install eligible measures. Once the customer accepts the proposal and signs the agreement the contractor calls the customer and schedules the work. Typically the work is completed within 45 days. Upon receipt of notice of completion and customer acceptance, payment to the contractor is processed and the customer's share of the conservation improvements is billed. Participation is tracked based on completed installations.

5.1.9 Commercial Energy Survey Program

The Commercial/Industrial Energy Audit Program has been offered for several years and is focused on increasing the energy efficiency and energy conservation of commercial buildings and includes a free survey comprised of a physical walk-through inspection of the commercial facility performed by highly trained and experienced energy experts. The survey will examine heating and air conditioning systems including duct work, refrigeration equipment, lighting, water heating, motors, process equipment, and the thermal characteristics of the building including insulation. Following the inspection the customer receives a written report detailing cost-effective recommendations to make the facility more energy and water efficient. Participating customers are encouraged to participate in other OUC commercial programs and directly benefit from energy conservation, which decreases their electric and water bills.

OUC customers can participate by calling the OUC Customer Service Call Center and requesting an appointment for a Walk-Through Energy. Participation is tracked through service orders that are produced when appointments are scheduled and completed.

5.1.10 Commercial Efficient Electric Heat Pump HVAC Rebate Program

The Commercial Heat Pump Rebate Program provides rebates to qualifying customers in existing buildings who install heat pumps having a seasonal energy efficiency ratio (SEER) of 15.0 or higher. Customers will obtain a rebate in the form of a credit on their bill ranging from $80 to $1,275, depending upon the SEER rating and capacity (tons) of the new heat pump. The following table illustrates the incentives available depending on the size and efficiency of the heat pump installed.

HEAT PUMP SIZE	HEAT PUMP SEER AND REBATE AMOUNT			
Tons	15	16	17	18
1	$80	$130	$175	$215
1 1/2	$145	$220	$290	$350
2	$205	$310	$400	$480
2 1/2	$270	$400	$515	$615
3	$335	$490	$625	$745
3 1/2	$395	$580	$735	$880
4	$460	$670	$850	$1,010
4 1/2	$525	$755	$960	$1,145
5	$590	$845	$1,075	$1,275

Customers can participate by submitting a rebate application form available online at http://www.OUC.com. Proofs of purchase and/or receipts are required to be attached to the application and repairs can be performed by a contractor. Participation is tracked based on the number of rebates processed. Typically these rebates are credited on the customer's bill, or a check can be processed and sent to the property owner who may have paid for the improvement.

5.1.11 Commercial Duct Repair/Replacement Rebate Program

The Duct Repair Rebate program started in 2009. OUC will rebate 100 percent of cost, up to $160. Qualifying customers must have an existing central air conditioning system of 5.5 tons or less and ducts must be sealed with mastic and fabric tape or Underwriters Laboratory (UL) approved duct tape.

Customers can participate by submitting a rebate application form available online at http://www.OUC.com. Proofs of purchase and/or receipts are required to be attached to the application and repairs can be performed by a contractor. Participation is tracked based on the number of rebates processed. Typically these rebates are credited on the customer's bill, or a check can be processed and sent to the property owner who may have paid for the improvement.

5.1.12 Commercial Window Film/Solar Screen Rebate Program

The Commercial Window Film/Solar Screen rebate program started in 2009 and are designed to help reflect the heat during hot summer days and retain heat on cool winter days. OUC will rebate customers $1 per square foot for window tinting and solar screening with a solar heat gain coefficient (SHGC) of 0.44 or shading coefficient of 0.5 or less.

Customers can participate by submitting a rebate application form available online at http://www.OUC.com. Proofs of purchase and/or receipts are required to be attached to the application and repairs can be performed by a contractor. Participation is tracked based on the number of rebates processed. Typically these rebates are credited on the customer's bill, or a check can be processed and sent to the property owner who may have paid for the improvement.

5.1.13 Commercial Ceiling Insulation Rebate Program

The Commercial Ceiling Insulation Rebate Program started in 2009 and was designed to increase a building's resistance to heat loss and gain. Participating customers receive $0.05 per square foot, for upgrading their attic insulation up to R-30. If the customer arranges an OUC pre-inspection and it is verified the existing insulation is R-11 or less, OUC will pay a rebate of $0.14 per square foot.

Customers can participate by submitting a rebate application form available online at http://www.OUC.com. Proofs of purchase and/or receipts are required to be attached to the application and repairs can be performed by a contractor. Participation is tracked based on the number of rebates processed. Typically these rebates are credited on the customer's bill, or a check can be processed and sent to the property owner who may have paid for the improvement.

5.1.14 Commercial Cool/Reflective Roof Rebate Program

The Commercial Cool/Reflective Roof Rebate Program started in 2009 and was designed to reflect the sun's rays and lower roof surface temperature while increasing the lifespan of the roof. OUC will rebate customers at $0.14 per square foot for ENERGY STAR® cool/reflective roofing that has an initial solar reflectance greater than or equal to 0.70.

Customers can participate by submitting a rebate application form available online at http://www.OUC.com. Proofs of purchase and/or receipts are required to be attached to the application and repairs can be performed by a contractor. Participation is tracked based on the number of rebates processed. Typically these rebates are credited on the customer's bill, or a check can be processed and sent to the property owner who may have paid for the improvement.

6.0 Forecast of Facilities Requirements

6.1 EXISTING CAPACITY RESOURCES AND REQUIREMENTS

6.1.1 Existing and Planned Generating Capacity

Tables 6-1 and 6-2, which are presented at the end of this section, indicate that the combined installed generating capability for OUC and St. Cloud (as of January 1, 2016) is 1,543 MW in the winter and 1,497 MW in the summer. OUC's existing generating capability (described in more detail in Section 2.0) consists of the following:

- A joint ownership share in the Stanton Energy Center (Units 1, 2, and Stanton A)
- Sole ownership of Stanton Energy Center Unit B (Stanton B)
- Joint ownership shares of the Indian River combustion turbine units
- Joint ownership shares of McIntosh Unit 3 and St. Lucie Unit 2

Additionally, St. Cloud's entitlement to capacity from Stanton Unit 2 is included as generating capability, consistent with the Interlocal Agreement described in Section 2.0

6.1.2 Power Purchase Agreements

Corresponding to the construction of Stanton A, OUC entered into a PPA with SCF to purchase capacity from SCF's 65 percent ownership share of Stanton A. The original Stanton A PPA was for a term of 10 years and allowed OUC, KUA, and FMPA to purchase all of SCF's 65 percent capacity share of Stanton A for 10 years. The utilities retained the right to reduce the capacity purchased from SCF by 50 MW each year, beginning in the sixth year of the PPA, as long as the total reduction in capacity purchased did not exceed 200 MW. The utilities originally had options to extend the PPA beyond its initial term. OUC, KUA, and FMPA have unilateral options to purchase all of Stanton A's capacity for the estimated 30 year useful life of the unit. Subsequent amendments to the original PPA continue OUC's capacity purchase until the 16th year of the PPA. Beginning with the 16th contract year and ending with the 20th contract year, OUC will maintain the irrevocable right to reduce the amount of capacity purchased by either 20 MW or 40 MW per year, as long as the total reduction in purchased capacity does not exceed 160 MW (this Ten-Year Site Plan reflects a 40 MW reduction to the Stanton A PPA beginning October 1, 2018, followed by additional 40 MW reductions beginning October 1, 2020, October 1, 2021, and October 1, 2022). OUC has the option of terminating the PPA on September 30, 2023, or extending the PPA up to an additional 10 years through two separate 5 year extensions. OUC has not made any commitments to extend or terminate the PPA with SCF at this time; discussion of OUC's projected capacity requirements throughout this Ten-Year Site Plan reflect expiration of the SCF PPA after September 30, 2023.

6.1.3 Power Sales Agreements

OUC's power sales to Vero Beach, Bartow, Lake Worth, and Winter Park are described in Section 2.3.

6.1.4 Retirements of Generating Facilities

OUC has not scheduled any unit retirements over the planning horizon, but will continue to evaluate options on an ongoing basis. One factor affecting potential unit modifications and/or retirements is the impact of pending future environmental regulations. OUC will continue to monitor future environmental regulations that may impact their operating fleet and decisions related to generating units, and develop appropriate corresponding compliance plans.

6.2 RESERVE MARGIN CRITERIA

The Florida Public Service Commission (FPSC) has established a minimum planned reserve margin criterion of 15 percent in 25-6.035 (1) Florida Administrative Code for the purposes of sharing responsibility for grid reliability. The 15 percent minimum planned reserve margin criterion is generally consistent with practice throughout much of the industry. OUC has adopted the 15 percent minimum reserve margin requirement as its planning criterion.

6.3 FUTURE RESOURCE NEEDS

6.3.1 Generator Capabilities and Requirements Forecast

Tables 6-1 and 6-2 (presented at the end of this section) display the forecast reserve margins for the combined OUC and St. Cloud systems for the winter and summer seasons, respectively. OUC's capacity from renewable projects (discussed in Section 2.4) that is projected to be available at the time of peak demand is also reflected in Tables 6-1 and 6-2.

Table 6-1 and Table 6-2 indicate that OUC is projected to have adequate generating capacity to maintain the 15 percent reserve margin requirements until the summer of 2021. The potential expiration of the SCF PPA following September 30, 2023 is projected to further increase OUC's need for additional capacity to maintain reserve margin requirements (as indicated by the shortfalls shown in the last column of Tables 6-2). Given the magnitude and timing of OUC's projected need for capacity, it has been assumed for purposes of this Ten-Year Site Plan that OUC will add combined cycle capacity to meet the projected capacity requirements. OUC has not made any commitments to extend or terminate the PPA with SCF at this time. OUC will continue to evaluate alternatives as part of its planning processes.

6.3.2 Transmission Capability and Requirements Forecast

OUC continuously monitors and upgrades the bulk power transmission system as necessary to provide reliable electric service to its customers. OUC's current transmission system planning criteria are summarized in its annual filing to the Federal Energy Regulatory Commission. Please see OUC's FERC Form 715 for additional information.

Table 6-1 Projected Winter Reserve Requirements – Base Case

Year	Retail and Wholesale Peak Demand (MW)							Available Capacity (MW)				Reserves (MW)		Excess/(Deficit) Capacity to Maintain 15% Reserve Margin[7] (MW)
	OUC	STC	Vero Beach	Bartow	Lake Worth	Winter Park	Total	Installed[1]	SEC A PPA[2]	Renewables[3]	Total[4]	Required[5]	Available[6]	
2015/16	1,006	132	139	59	34	18	1,386	1,543	343	18	1,903	171	517	346
2016/17	1,020	161	140	62	36	18	1,438	1,543	343	18	1,903	177	465	288
2017/18	1,041	166	143	0	38	19	1,407	1,543	343	19	1,904	181	498	317
2018/19	1,059	171	145	0	0	19	1,394	1,543	303	19	1,864	184	471	286
2019/20	1,075	174	148	0	0	0	1,397	1,543	303	20	1,865	187	468	280
2020/21	1,086	178	151	0	0	0	1,415	1,543	263	20	1,825	190	410	220
2021/22	1,104	182	153	0	0	0	1,439	1,543	223	20	1,785	193	346	153
2022/23	1,117	187	156	0	0	0	1,460	1,543	183	20	1,745	196	286	90
2023/24	1,132	191	0	0	0	0	1,323	1,543	0	20	1,562	198	240	41
2024/25	1,143	195	0	0	0	0	1,338	1,543	0	20	1,562	201	224	23

[1] Includes existing net capability to serve OUC and St. Cloud.

[2] The SEC A PPA has provisions for reduction beginning 10/1/2018 and extension beyond its current expiration (9/30/2023). For purposes of this Ten-Year Site Plan, the PPA is shown as being reduced by 40 MW on 10/1/2018, 10/1/2020, 10/1/2021, and 10/1/2022 and terminating effective 10/1/2023. OUC has not made any commitments to extend or terminate the PPA with SCF at this time.

[3] Capacity of "Renewables" reflects capacity value projected to be available at time of peak demand.

[4] "Totals" may not add due to rounding.

[5] "Required Reserves" include 15 percent reserve margin on OUC retail peak demand and STC retail peak demand. Reserves associated with the Vero Beach contract are included in the column labeled "Vero Beach".

[6] "Available Reserves" equals the difference between total available capacity and total peak demand.

[7] Calculated as the difference between available reserves and required reserves.

Table 6-2 Projected Summer Reserve Requirements – Base Case

Year	Retail and Wholesale Peak Demand (MW)							Available Capacity (MW)				Reserves (MW)		Excess/(Deficit) Capacity to Maintain 15% Reserve Margin[7] (MW)
	OUC	STC	Vero Beach	Bartow	Lake Worth	Winter Park	Total	Installed[1]	SEC A PPA[2]	Renewables[3]	Total[4]	Required[5]	Available[6]	
2016	1,160	164	129	59	34	18	1,562	1,497	322	27	1,847	199	284	86
2017	1,184	170	130	61	36	19	1,600	1,497	322	27	1,847	203	247	44
2018	1,203	175	133	0	38	19	1,568	1,497	322	28	1,848	207	280	74
2019	1,220	179	135	0	0	19	1,554	1,497	282	28	1,808	210	254	44
2020	1,236	183	138	0	0	0	1,557	1,497	282	29	1,809	213	252	39
2021	1,256	188	141	0	0	0	1,585	1,497	242	29	1,769	217	184	(32)
2022	1,273	192	143	0	0	0	1,609	1,497	202	29	1,729	220	120	(100)
2023	1,289	197	146	0	0	0	1,632	1,497	162	29	1,689	223	57	(166)
2024	1,302	202	0	0	0	0	1,504	1,497	0	29	1,526	226	22	(203)
2025	1,322	206	0	0	0	0	1,528	1,497	0	29	1,526	229	(1)	(231)

[1] Includes existing net capability to serve OUC and St. Cloud.

[2] The SEC A PPA has provisions for reduction beginning 10/1/2018 and extension beyond its current expiration (9/30/2023). For purposes of this Ten-Year Site Plan, the PPA is shown as being reduced by 40 MW on 10/1/2018, 10/1/2020, 10/1/2021, and 10/1/2022 and terminating effective 10/1/2023. OUC has not made any commitments to extend or terminate the PPA with SCF at this time.

[3] Capacity of "Renewables" reflects capacity value projected to be available at time of peak demand.

[4] "Totals" may not add due to rounding.

[5] "Required Reserves" include 15 percent reserve margin on OUC retail peak demand and STC retail peak demand. Reserves associated with the Vero Beach contract are included in the column labeled "Vero Beach".

[6] "Available Reserves" equals the difference between total available capacity and total peak demand.

[7] Calculated as the difference between available reserves and required reserves.

7.0 Supply-Side Alternatives

As discussed previously, consideration of OUC's existing generating resources and OUC's current base case load forecast indicates that OUC is expecting to have adequate capacity to satisfy forecast reserve margin requirements until the summer of 2021. Given the magnitude and timing of OUC's projected need for capacity, it has been assumed for purposes of this Ten-Year Site Plan that OUC will add combined cycle capacity to meet the projected capacity requirements. It should be noted that OUC's existing Stanton Energy Center and Indian River sites may accommodate future generating unit additions. OUC has not made any commitments to new capacity additions, and will continue to evaluate its power supply requirements and alternatives as part of its planning processes.

8.0 Economic Evaluation Criteria and Methodology

This section presents the economic evaluation criteria and methodology used for OUC's current planning processes.

8.1 ECONOMIC PARAMETERS

The economic parameters are summarized below and are presented on an annual basis.

8.1.1 Inflation and Escalation Rates

The general inflation rate, construction cost escalation rate, fixed O&M escalation rate, and nonfuel variable O&M escalation rate are each assumed to be 2.5 percent.

8.1.2 Present Worth Discount Rate

The present worth discount rate is assumed to be equal to OUC's embedded rate for new debt of 5.5 percent.

8.1.3 Interest During Construction Rate

The interest during construction (IDC) rate used by OUC for economic evaluations is 5.5 percent.

8.1.4 Fixed Charge Rate

The fixed charge rate (FCR) represents the sum of a project's fixed charges as a percent of the initial investment cost. When the FCR is applied to the initial investment, the product equals the revenue requirements needed to offset the fixed charges during a given year. A separate FCR can be calculated and applied to each year of an economic analysis, but it is common practice to use a single, levelized FCR that has the same present value as the year-by-year FCR. The FCR calculation includes 0.10 percent for property insurance. Bond issuance fees and insurance costs are not included in the calculation of the levelized FCR, since these are already considered in OUC's embedded debt rate. Assuming a 30 year financing term, the resulting levelized FCR is 6.98 percent. Note that the FCR is only applicable to new unit additions that may be added to maintain reserve margin requirements in this Ten-Year Site Plan (i.e. the new combined cycle capacity hat has been discussed previously).

8.2 FUEL PRICE FORECASTS

The natural gas and fuel oil price forecasts reflected in this Ten-Year Site Plan were developed based on a combination of the NYMEX forward curve and projections provided by PIRA Energy Group (PIRA). PIRA Energy Group was founded in 1976 and is an international energy consulting firm specializing in global energy market analysis and intelligence. Among other services, PIRA offers consulting on a broad range of subjects in the international crude oil, petroleum products, natural gas, electricity, coal, biofuels and emissions markets. PIRA's clients include international and national integrated oil and gas companies, independent producers, refiners, marketers, oil and gas pipelines, electric and gas utilities, industrials, trading companies, financial institutions and government agencies.

The coal forecast presented reflected in this Ten-Year Site Plan was developed based on projections by Energy Ventures Analysis, Inc. (EVA) for use by OUC. EVA is a consulting firm that engages in a variety of projects for private and public sector clients related to energy and environmental issues. In the energy area, much of EVA's work is related to analysis of the electric utility industry and fuel markets, particularly oil, natural gas, and coal. EVA's clients in these areas include coal, oil, and

natural gas producers; electric utility and industrial energy consumers; and gas pipelines and railroads. EVA also works for a number of public agencies, such as state regulatory commissions, the US Environmental Protection Agency, and the US Department of Energy, as well as interveners in utility rate proceedings, such as consumer counsels and municipalities. Another group of clients include trade and industry associations, such as the Electric Power Research Institute, the Gas Research Institute, and the Center for Energy and Economic Development. EVA has provided testimony to numerous state public utility commissions, including the Florida Public Service Commission. Furthermore, the firm has filed testimony in a number of cases in both state and federal courts, as well as before the Federal Energy Regulatory Commission.

9.0 Analysis and Results

As discussed previously, consideration of OUC's existing generating resources and OUC's current base case load forecast indicates that OUC is expecting to have adequate capacity to satisfy forecast reserve margin requirements until the summer of 2021. Given the magnitude and timing of OUC's projected need for capacity, it has been assumed for purposes of this Ten-Year Site Plan that OUC will add combined cycle capacity to meet the projected capacity requirements. It should be noted that OUC's existing Stanton Energy Center and Indian River sites may accommodate future generating unit additions. OUC has not made any commitments to new capacity additions, and will continue to evaluate its power supply requirements and alternatives as part of its planning processes.

For informational purposes, OUC utilized PCI GenTrader to obtain the annual production costs associated for various load, fuel, and other sensitivity cases. GenTrader is a computer-based chronological production costing model developed for use in power supply system planning. GenTrader simulates the hour-by-hour operation of a power supply system over a specified planning period. Required inputs include the performance characteristics of generating units, fuel costs, and the system hourly load profile for each year.

The cumulative present worth cost (CPWC) calculations presented in this section account for annual system costs (i.e. fuel and energy, non-fuel variable O&M, and startup costs) for each year of the expansion planning period and discounts each back to 2016 at the present worth discount rate of 5.5 percent. These annual present worth costs are then summed over the 2016 through 2025 period to calculate the total CPWC of the expansion plan being considered. Such analysis allows for a comparison of CPWC between various capacity expansion plans across the sensitivities considered.

9.1 CPWC ANALYSES

9.1.1 Base Case Analysis

The base case considers the base load forecast presented in Section 4 and the base fuel price forecasts. The CPWC associated with the base case analysis is approximately $2.09 billion.

9.1.2 Sensitivity Analyses

As part of its capacity planning process, OUC considers a number of sensitivity analyses to measure the impact of variations to critical assumptions. Among the numerous sensitivities that OUC may consider in its planning processes are high and low fuel prices, high and low load and energy growth projections, a case in which the differential between natural gas and coal price projections is held constant over time, and a high present worth discount rate case. Of these sensitivities only the high and low load and energy growth projection sensitivities would potentially impact the timing of unit additions as compared to the Base Case analysis. For informational purposes, the following subsections describe the high and low load and energy growth, the high and low fuel price, the constant differential fuel price, and the high present worth discount rate sensitivities.

9.1.2.1 High Load Forecast Sensitivity

The high load forecast is presented in Section 4.0; capacity additions may be required by the summer of 2019 to maintain the 15 percent reserve margin under the high load forecast sensitivity. The CPWC associated with the high load analysis is approximately $2.19 billion.

9.1.2.2 Low Load Forecast Sensitivity

The low load forecast is presented in Section 4.0; capacity additions may be required by the summer of 2023 to maintain the 15 percent reserve margin under the low load forecast sensitivity. The CPWC associated with the low load analysis is approximately $2.02 billion.

9.1.2.3 High Fuel Price Forecast Sensitivity

OUC's contractual arrangements for coal delivery will mitigate the effects of volatility in coal prices; however, for purposes of this analysis this factor was not considered. The CPWC associated with the high natural gas and coal price forecast sensitivity is approximately $2.28 billion.

9.1.2.4 Low Fuel Price Forecast Sensitivity

OUC's contractual arrangements for coal delivery will mitigate the effects of volatility in coal prices; however, for purposes of this analysis this factor was not considered. The CPWC associated with the low natural gas and coal price forecast sensitivity is approximately $1.95 billion.

9.1.2.5 Constant Differential Natural Gas and Coal Price Forecast Sensitivity

The constant differential natural gas and coal price forecast sensitivity assumes that differential in price between coal and natural gas projected for 2016 will remain constant through 2025. The CPWC associated with the constant differential natural gas and coal price forecast sensitivity is approximately $1.99 billion.

9.1.2.6 High Present Worth Discount Rate Sensitivity

The high present worth discount rate sensitivity assumes a 10 percent present worth discount rate instead of the 5.5 percent present worth discount rate used in the other economic analyses discussed in this section. The CPWC associated with the high present worth discount rate sensitivity is approximately $1.71 billion.

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10.0 Environmental and Land Use Information

As discussed previously, consideration of OUC's existing generating resources and OUC's current base case load forecast indicates that OUC is expecting to have adequate capacity to satisfy forecast reserve margin requirements until the summer of 2021. Given the magnitude and timing of OUC's projected need for capacity, it has been assumed for purposes of this Ten-Year Site Plan that OUC will add combined cycle capacity to meet the projected capacity requirements. It should be noted that OUC's existing Stanton Energy Center and Indian River sites may accommodate future generating unit additions. OUC has not made any commitments to new capacity additions, and will continue to evaluate its power supply requirements and alternatives as part of its planning processes.

11.0 Conclusions

As discussed previously, consideration of OUC's existing generating resources and OUC's current base case load forecast indicates that OUC is expecting to have adequate capacity to satisfy forecast reserve margin requirements until the summer of 2021. Given the magnitude and timing of OUC's projected need for capacity, it has been assumed for purposes of this Ten-Year Site Plan that OUC will add combined cycle capacity to meet the projected capacity requirements. It should be noted that OUC's existing Stanton Energy Center and Indian River sites may accommodate future generating unit additions. OUC has not made any commitments to new capacity additions, and will continue to evaluate its power supply requirements and alternatives as part of its planning processes.

12.0 Ten-Year Site Plan Schedules

This section presents the schedules required by the Ten-Year Site Plan rules for the Florida Public Service Commission (FPSC). The Schedules are presented in the same format in which they will be provided in response to the FPSC's Supplemental Data Request. The information contained within the FPSC Schedules is representative of the combined OUC and City of St. Cloud systems, consistent with all sections of the 2016 OUC Ten-Year Site Plan.

Schedule 1
Existing Generating Facilities
As of December 31, 2015

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
								Alt.				Net Capability	
	Unit		Unit	Fuel		Fuel Transport		Fuel Days	Commercial In-Service	Expected Retirement	Gen. Max. Nameplate	Summer	Winter
Plant Name	No.	Location	Type	Pri	Alt	Pri	Alt	Use	Month/Year	Month/Year	KW[1]	MW	MW
Indian River	A	Brevard	GT	NG	DFO	PL	TK	0.2	06/89	Unknown	41,400	15.6[2]	18.1[2]
Indian River	B	Brevard	GT	NG	DFO	PL	TK	0.2	07/89	Unknown	41,400	15.6[2]	18.1[2]
Indian River	C	Brevard	GT	NG	DFO	PL	TK	0.2	08/92	Unknown	130,000	83.0[3]	88.5[3]
Indian River	D	Brevard	GT	NG	DFO	PL	TK	0.2	10/92	Unknown	130,000	83.0[3]	88.5[3]
Stanton Energy Center	1	Orange	ST	BIT	NA	RR	UN	UN	07/87	Unknown	464,500	302.3[4]	302.3[4]
Stanton Energy Center	2	Orange	ST	BIT	NA	RR	UN	UN	06/96	Unknown	464,500	339.4[5]	339.4[5]
Stanton Energy Center	A	Orange	CC	NG	DFO	PL	TK	3	10/01	Unknown		173.6[6]	184.8[6]
Stanton Energy Center	B	Orange	CC	NG	DFO	PL	TK	3	02/10	Unknown	333,000	292	307
McIntosh	3	Polk	ST	BIT	NA	REF	UN	UN	09/82	Unknown		133[7]	136[7]
St. Lucie[8]	2	St. Lucie	ST	NUC	NA	TK	UN	UN	08/83	Unknown		60	60

NOTES:

[1] Nameplate ratings are reported for units which OUC maintains majority ownership. Values reported are for the entire unit (not just OUC's ownership share)

[2] Reflects an OUC ownership share of 48.8 percent.

[3] Reflects an OUC ownership share of 79.0 percent.

[4] Reflects an OUC ownership share of 68.6 percent.

[5] Reflects an OUC ownership share of 71.6 percent and St. Cloud entitlement of 3.4 percent.

[6] Reflects an OUC ownership share of 28.0 percent.

[7] Reflects an OUC ownership share of 40.0 percent.

[8] OUC owns approximately 6.1 percent of St. Lucie Unit No. 2. Reliability exchange divides 50 percent power from Unit No. 1 and 50 percent power from Unit No. 2.

Schedule 2.1
History and Forecast of Energy Consumption and Number of Customers by Customer Class

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
			Rural and Residential				Commercial	
Year	Population	Members per Household	GWH	Average No. of Customers	Average KWH Consumption Per Customer	GWH	Average No. of Customers	Average KWH Consumption Per Customer
HISTORY:								
2006	436,000	2.55	2,241	170,765	13,125	340	20,034	16,960
2007	451,696	2.56	2,223	176,435	12,599	363	20,230	17,922
2008	457,897	2.55	2,269	179,785	12,622	395	20,463	19,283
2009	452,220	2.55	2,235	177,163	12,615	317	20,762	15,264
2010	454,300	2.55	2,325	178,197	13,047	311	21,648	14,366
2011	458,940	2.55	2,223	180,072	12,347	311	22,138	14,026
2012	466,940	2.56	2,140	182,570	11,723	319	23,198	13,730
2013	476,916	2.56	2,153	186,455	11,549	345	22,585	15,254
2014	485,016	2.55	2,264	190,279	11,899	379	23,376	16,230
2015	496,659	2.54	2,430	195,606	12,421	393	23,705	16,579
FORECAST:								
2016	512,236	2.55	2,390	200,956	11,894	391	24,207	16,137
2017	528,779	2.55	2,472	207,444	11,915	394	25,054	15,725
2018	545,598	2.55	2,543	214,044	11,879	399	25,917	15,379
2019	561,533	2.55	2,605	220,297	11,824	403	26,734	15,068
2020	577,165	2.55	2,661	226,429	11,751	407	27,535	14,778
2021	592,351	2.55	2,726	232,386	11,730	411	28,312	14,509
2022	607,556	2.55	2,796	238,350	11,733	415	29,090	14,254
2023	623,018	2.55	2,863	244,414	11,713	419	29,881	14,008
2024	638,460	2.55	2,931	250,473	11,701	422	30,670	13,775
2025	654,004	2.55	2,998	256,569	11,686	426	31,465	13,552

Notes:
Represents total of OUC and St. Cloud.

Schedule 2.2
History and Forecast of Energy Consumption and Number of Customers by Customer Class

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Year	GWH	Industrial Average No. of Customers	Average KWH Consumption Per Customer	Railroads and Railways GWH	Street & Highway Lighting GWH	Other Sales to Public Authorities GWH	Total Sales to Ultimate Consumers GWH
HISTORY:							
2006	3,347	5,675	589,871	0	49	6	5,984
2007	3,434	5,843	587,637	0	54	6	6,079
2008	3,390	5,961	568,659	0	45	17	6,115
2009	3,418	6,725	508,217	0	46	15	6,031
2010	3,414	7,201	474,101	0	51	31	6,030
2011	3,422	7,428	460,737	0	34	30	6,021
2012	3,392	7,558	448,853	0	35	30	5,955
2013	3,467	5,718	606,442	0	29	30	6,025
2014	3,489	5,618	621,007	0	30	29	6,370
2015	3,514	5,793	606,546	0	61	139	6,536
FORECAST:							
2016	3,509	5,899	594,847	0	55	134	6,479
2017	3,556	6,103	582,729	0	55	135	6,612
2018	3,602	6,311	570,828	0	54	135	6,733
2019	3,646	6,507	560,285	0	55	135	6,843
2020	3,688	6,698	550,584	0	57	136	6,948
2021	3,726	6,883	541,292	0	59	136	7,057
2022	3,756	7,069	531,272	0	61	136	7,164
2023	3,786	7,258	521,627	0	64	136	7,267
2024	3,816	7,445	512,523	0	66	136	7,371
2025	3,846	7,634	503,817	0	68	136	7,474

Notes:
Represents total of OUC and St. Cloud.

Schedule 2.3
History and Forecast of Energy Consumption and Number of Customers by Customer Class

(1)	(2)	(3)	(4)	(5)	(6)
Year	Sales for Resale GWH	Utility Use & Losses GWH	Net Energy for Load GWH	Other Customers (Average No.)	Total No. of Customers
HISTORY:					
2006	18	248	6,250	0	196,474
2007	0	262	6,341	0	202,508
2008	0	150	6,265	0	206,209
2009	0	223	6,252	0	204,650
2010	469	277	6,767	0	207,046
2011	768	188	6,977	0	209,638
2012	764	346	7,135	0	214,758
2013	769	272	7,065	0	214,758
2014	1,000	332	7,868	0	219,272
2015	1,317	268	8,120	0	225,105
FORECAST:					
2016	966	247	7,692	0	231,062
2017	961	255	7,828	0	238,601
2018	713	254	7,700	0	246,271
2019	480	255	7,578	0	253,538
2020	393	255	7,595	0	260,662
2021	429	256	7,743	0	267,582
2022	414	257	7,835	0	274,509
2023	440	257	7,964	0	281,552
2024	0	257	7,628	0	288,588
2025	0	258	7,732	0	295,668

Notes:
Represents total of OUC and St. Cloud.
"Net Energy for Load" may not match other Schedules due to rounding.

Schedule 3.1
History and Forecast of Summer Peak Demand
Base Case

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Year	Total	Wholesale	Retail	Interruptible	Residential Load Management	Residential Conservation	Comm./Ind. Load Management	Comm./Ind. Conservation	Net Firm Demand
HISTORY:									
2006	1,230	22	1,208	0	0	0.0	0.0	0.0	1,230
2007	1,256	0	1,256	0	0	0.0	0.0	0.0	1,256
2008	1,221	0	1,221	0	0	0.0	0.0	0.0	1,221
2009	1,244	0	1,244	0	0	0.0	0.0	0.0	1,244
2010	1,295	74	1,218	0	0	1.0	0.0	1.7	1,292
2011	1,371	164	1,205	0	0	1.0	0.0	0.6	1,369
2012	1,381	165	1,214	0	0	0.6	0.0	1.7	1,379
2013	1,413	157	1,256	0	0	0.7	0.0	0.9	1,411
2014	1,500	203	1,297	0	0	0.6	0.0	0.2	1,499
2015	1,531	206	1,325	0	0	0.4	0.0	2.2	1,528
FORECAST:									
2016	1,563	239	1,324	0	0	0.1	0	0.2	1,562
2017	1,601	246	1,355	0	0	0.2	0	0.5	1,600
2018	1,569	190	1,379	0	0	0.4	0	0.8	1,568
2019	1,555	154	1,401	0	0	0.6	0	1.1	1,554
2020	1,559	138	1,421	0	0	0.8	0	1.5	1,557
2021	1,588	141	1,447	0	0	1.0	0	1.9	1,585
2022	1,612	143	1,469	0	0	1.2	0	2.3	1,609
2023	1,636	146	1,490	0	0	1.4	0	2.7	1,632
2024	1,509	0	1,509	0	0	1.5	0	3.1	1,504
2025	1,533	0	1,533	0	0	1.7	0	3.4	1,528

Notes:
Represents total of OUC and St. Cloud. Peak demands may not match other schedules due to non-coincidence of OUC and St. Cloud peaks and/or rounding.
"Residential Conservation" and "Comm/Ind. Conservation" represent cumulative annual demand reductions.
Forecast "Net Firm Demand" may not exactly match up with peak demands presented in the 2016 OUC Ten-Year Site Plan due to rounding.
2010 through 2015 "Conservation" represents OUC's actual conservation achievements. Forecast "Conservation" represents cumulative conservation projections.

Schedule 3.2
History and Forecast of Winter Peak Demand
Base Case

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Year	Total	Wholesale	Retail	Interruptible	Residential Load Management	Residential Conservation	Comm./Ind. Load Management	Comm./Ind. Conservation	Net Firm Demand
HISTORY:									
2005/06	1,203	123	1,080	1	0	0.0	0.0	0.0	1,202
2006/07	1,117	22	1,095	0	0	0.0	0.0	0.0	1,117
2007/08	957	0	957	0	0	0.0	0.0	0.0	957
2008/09	1,178	0	1,178	0	0	0.0	0.0	0.0	1,178
2009/10	1,337	36	1,299	0	0	0.8	0.0	0.9	1,335
2010/11	1,323	174	1,147	0	0	0.8	0.0	0.6	1,321
2011/12	1,216	182	1,032	0	0	0.5	0.0	1.8	1,214
2012/13	1,183	155	1,028	0	0	0.5	0.0	0.9	1,182
2013/14	1,275	201	1,074	0	0	0.4	0.0	0.2	1,275
2014/15	1,374	207	1,166	0	0	0.4	0.0	0.7	1,372
FORECAST:									
2015/16	1,387	249	1,138	0	0	0.1	0	0.6	1,386
2016/17	1,440	257	1,183	0	0	0.2	0	1.3	1,438
2017/18	1,409	199	1,210	0	0	0.4	0	2.0	1,407
2018/19	1,397	164	1,233	0	0	0.6	0	2.6	1,394
2019/20	1,402	148	1,254	0	0	0.8	0	3.3	1,397
2020/21	1,420	151	1,270	0	0	1.0	0	4.1	1,415
2021/22	1,445	153	1,292	0	0	1.2	0	4.9	1,439
2022/23	1,467	156	1,311	0	0	1.4	0	5.6	1,460
2023/24	1,330	0	1,330	0	0	1.5	0	6.3	1,323
2024/25	1,347	0	1,347	0	0	1.7	0	7.0	1,338

Notes:
Represents total of OUC and St. Cloud. Peak demands may not match other schedules due to non-coincidence of OUC and St. Cloud peaks and/or rounding.
"Residential Conservation" and "Comm/Ind. Conservation" represent cumulative annual demand reductions.
Forecast "Net Firm Demand" may not exactly match up with peak demands presented in the 2015 OUC Ten-Year Site Plan due to rounding.
2010/11 through 2014/15 "Conservation" represents OUC's actual conservation achievements. Forecast "Conservation" represents cumulative conservation projections.

Schedule 3.3
History and Forecast of Annual Net Energy for Load - GWH
Base Case

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Year	Total	Residential Conservation	Comm./Ind. Conservation	Retail	Wholesale	Utility Use & Losses	Net Energy for Load	Load Factor %
HISTORY:								
2006	6,250	0	0	5,984	18	248	6,250	58.0%
2007	6,341	0	0	6,079	0	262	6,341	57.6%
2008	6,265	0	0	6,115	0	150	6,265	58.6%
2009	6,252	0	0	6,031	0	223	6,252	57.4%
2010	6,986	3.01	5.8	6,030	469	277	6,767	58.2%
2011	6,983	2.7	3	6,021	768	188	6,977	58.2%
2012	7,074	1.9	7.3	5,917	764	346	7,027	58.2%
2013	7,072	1.9	4.5	6,025	769	272	7,065	57.2%
2014	7,526	1.8	1.0	6,191	1,000	332	7,523	57.3%
2015	8,135	0.8	13.4	6,536	1,317	268	8,120	60.7%
FORECAST:								
2015	7,693	0.3	0.5	6,479	966	247	7,692	56.2%
2016	7,830	0.8	1.2	6,612	961	255	7,828	55.8%
2017	7,704	1.4	1.9	6,733	713	254	7,700	56.1%
2018	7,583	2.1	2.7	6,843	480	255	7,578	55.7%
2019	7,602	2.8	3.6	6,948	393	255	7,595	55.7%
2020	7,750	3.6	4.1	7,057	429	256	7,743	55.8%
2021	7,844	4.4	5.0	7,164	414	257	7,835	55.6%
2022	7,974	5.0	5.8	7,267	440	257	7,964	55.7%
2023	7,640	5.6	6.6	7,371	0	257	7,628	57.9%
2024	7,746	6.2	7.4	7,474	0	258	7,732	57.8%

Notes:
Represents total of OUC and St. Cloud. NEL may not match other schedules due to rounding.
"Residential Conservation" and "Comm/Ind. Conservation" represent annual GWh reductions.
2010 through 2015 "Conservation" represents OUC's actual conservation achievements. Forecast "Conservation" represents cumulative conservation projections.

Schedule 4
Previous Year and 2-Year Forecast of Retail Peak Demand and Net Energy for Load by Month

(1)	(2)	(3)	(4)	(5)	(6)	(7)
	2015 Actual		2016 Forecast		2017 Forecast	
	Peak Demand	NEL	Peak Demand	NEL	Peak Demand	NEL
Month	MW	GWH	MW	GWH	MW	GWH
January	906	494	1,138	511	1,181	526
February	1,150	451	1,109	466	1,143	460
March	1,015	514	1,000	490	1,021	503
April	1,071	554	1,044	515	1,067	527
May	1,227	612	1,191	587	1,216	604
June	1,316	637	1,253	622	1,281	636
July	1,256	660	1,318	663	1,349	678
August	1,281	655	1,324	680	1,354	695
September	1,262	616	1,268	628	1,299	639
October	1,143	561	1,201	573	1,229	584
November	1,127	526	1,020	484	1,044	497
December	986	523	974	507	997	517

Notes:
Represents the total of OUC and St. Cloud retail peak demands and net energy for load. Wholesale sales are not included.
Peak demands may not match other schedules due to non-coincidence of OUC and St. Cloud peaks and/or rounding.

Schedule 5
Fuel Requirements

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
	Fuel Requirements		Units	Actual 2014	Actual 2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
(1)	Nuclear		Trillion BTU	5	5	5	5	5	5	5	5	5	5	6	6
(2)	Coal		1000 Ton	1,435	1,372	878	983	1,035	1,304	1,319	1,086	1,326	1,510	1,703	1,892
(3)	Residual	Total	1000 BBL	0	0	0	0	0	0	0	0	0	0	0	0
(4)		Steam	1000 BBL	0	0	0	0	0	0	0	0	0	0	0	0
(5)		CC	1000 BBL	0	0	0	0	0	0	0	0	0	0	0	0
(6)		CT	1000 BBL	0	0	0	0	0	0	0	0	0	0	0	0
(7)		Other	1000 BBL	0	0	0	0	0	0	0	0	0	0	0	0
(8)	Distillate	Total	1000 BBL	2	0	0	0	0	0	0	0	0	0	0	0
(9)		Steam	1000 BBL	0	0	0	0	0	0	0	0	0	0	0	0
(10)		CC	1000 BBL	2	0	0	0	0	0	0	0	0	0	0	0
(11)		CT	1000 BBL	0	0	0	0	0	0	0	0	0	0	0	0
(12)		Other	1000 BBL	0	0	0	0	0	0	0	0	0	0	0	0
(13)	Natural Gas	Total	1000 MCF	25,865	33,070	36,357	35,801	34,068	28,168	27,628	33,239	29,251	27,477	21,140	18,387
(14)		Steam	1000 MCF	2,825	0	0	0	0	0	0	0	0	0	0	0
(15)		CC	1000 MCF	22,851	32,868	35,850	34,871	33,401	27,656	27,287	32,573	29,081	26,981	20,907	18,294
(16)		CT	1000 MCF	189	202	507	930	667	512	341	667	171	496	233	93
(17)	Other (Specify)		Trillion BTU	0	0	0	0	0	0	0	0	0	0	0	0

Notes:
Natural gas CC includes SEC A purchases from Southern - Florida, LLC

Schedule 6.1
Energy Sources

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
	Energy Sources		Units	Actual 2014	Actual 2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
(1)	Firm Inter-Region Interchange		GWH	0	0	0	0	0	0	0	0	0	0	0	0
(2)	Nuclear		GWH	472	450	495	481	458	483	493	463	492	504	558	586
(3)	Coal		GWH	3,534	2,990	2,021	2,119	2,226	2,867	2,922	2,328	2,946	3,385	3,844	4,287
(4)	Residual	Total	GWH	0	0	0	0	0	0	0	0	0	0	0	0
(5)		Steam	GWH	0	0	0	0	0	0	0	0	0	0	0	0
(6)		CC	GWH	0	0	0	0	0	0	0	0	0	0	0	0
(7)		CT	GWH	0	0	0	0	0	0	0	0	0	0	0	0
(8)		Other	GWH	0	0	0	0	0	0	0	0	0	0	0	0
(9)	Distillate	Total	GWH	1	0	0	0	0	0	0	0	0	0	0	0
(10)		Steam	GWH	0	0	0	0	0	0	0	0	0	0	0	0
(11)		CC	GWH	1	0	0	0	0	0	0	0	0	0	0	0
(12)		CT	GWH	0	0	0	0	0	0	0	0	0	0	0	0
(13)		Other	GWH	0	0	0	0	0	0	0	0	0	0	0	0
(14)	Natural Gas	Total	GWH	3,405	4,578	5,040	4,937	4,708	3,901	3,833	4,605	4,050	3,728	2,879	2,512
(15)		Steam	GWH	248	0	0	0	0	0	0	0	0	0	0	0
(16)		CC	GWH	3,156	4,565	5,007	4,877	4,665	3,868	3,811	4,562	4,039	3,696	2,864	2,506
(17)		CT	GWH	1	13	33	60	43	33	22	43	11	32	15	6
(18)	NUG		GWH	0	0	0	0	0	0	0	0	0	0	0	0
(19)	Renewables	Total	GWH	109	102	136	291	308	327	347	347	347	347	347	347
(20)		Biofuels	GWH	0	0	0	0	0	0	0	0	0	0	0	0
(21)		Biomass	GWH	0	0	0	0	0	0	0	0	0	0	0	0
(22)		Hydro	GWH	0	0	0	0	0	0	0	0	0	0	0	0
(23)		Landfill Gas	GWH	99	93	120	266	279	291	311	311	311	311	311	311
(24)		MSW	GWH	0	0	0	0	0	0	0	0	0	0	0	0
(25)		Solar	GWH	10	9	16	25	29	36	36	36	36	36	36	36
(26)		Wind	GWH	0	0	0	0	0	0	0	0	0	0	0	0
(27)		Other	GWH	0	0	0	0	0	0	0	0	0	0	0	0
(28)	Other (Specify)		GWH	0	0	0	0	0	0	0	0	0	0	0	0
(29)	Net Energy for Load		GWH	7,521	8,120	7,692	7,828	7,700	7,578	7,595	7,743	7,835	7,964	7,628	7,732

Notes:
Total Net Energy for Load may not correspond to other Schedules due to rounding.
Natural gas CC includes SEC A purchases from Southern - Florida, LLC

Schedule 6.2
Energy Sources

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
	Energy Sources		Units	Actual 2014	Actual 2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
(1)	Firm Inter-Region Interchange		%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
(2)	Nuclear		%	6.27%	5.54%	6.44%	6.14%	5.95%	6.37%	6.49%	5.98%	6.28%	6.33%	7.32%	7.58%
(3)	Coal		%	46.99%	36.82%	26.28%	27.07%	28.91%	37.83%	38.47%	30.07%	37.60%	42.50%	50.39%	55.44%
(4)	Residual	Total	%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
(5)		Steam	%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
(6)		CC	%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
(7)		CT	%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
(8)		Other	%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
(9)	Distillate	Total	%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
(10)		Steam	%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
(11)		CC	%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
(12)		CT	%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
(13)		Other	%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
(14)	Natural Gas	Total	%	45.27%	56.38%	65.52%	63.07%	61.14%	51.48%	50.47%	59.47%	51.69%	46.81%	37.74%	32.49%
(15)		Steam	%	3.30%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
(16)		CC	%	41.96%	56.22%	65.10%	62.30%	60.58%	51.04%	50.18%	58.92%	51.55%	46.41%	37.55%	32.41%
(17)		CT	%	0.01%	0.16%	0.43%	0.77%	0.56%	0.44%	0.29%	0.56%	0.14%	0.40%	0.20%	0.08%
(18)	NUG		%												
(19)	Renewables	Total	%	1.45%	1.26%	1.77%	3.72%	4.00%	4.32%	4.57%	4.48%	4.43%	4.36%	4.55%	4.49%
(20)		Biofuels	%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
(21)		Biomass	%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
(22)		Hydro	%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
(23)		Landfill Gas	%	1.32%	1.15%	1.56%	3.40%	3.62%	3.84%	4.09%	4.02%	3.97%	3.91%	4.08%	4.02%
(24)		MSW	%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
(25)		Solar	%	0.13%	0.12%	0.21%	0.32%	0.38%	0.48%	0.47%	0.46%	0.46%	0.45%	0.47%	0.47%
(26)		Wind	%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
(27)		Other	%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
(28)	Other (Specify)		%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
(29)	Net Energy for Load		%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Notes:
Natural gas CC includes SEC A purchases from Southern - Florida, LLC

Schedule 7.1
Forecast of Capacity, Demand, and Scheduled Maintenance at Time of Summer Peak

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Year	Total Installed Capacity MW	Firm Capacity Import MW	Firm Capacity Export MW	QF MW	Total Capacity Available MW	System Firm Summer Peak Demand MW	Reserve Margin before Maintenance MW	Reserve Margin before Maintenance % of Peak	Scheduled Maintenance MW	Reserve Margin after Maintenance MW	Reserve Margin after Maintenance % of Peak
FORECAST:											
2016	1,497	349	0	0	1,847	1,562	284	18%	0	284	18%
2017	1,497	349	0	0	1,847	1,600	247	15%	0	247	15%
2018	1,497	350	0	0	1,848	1,568	280	18%	0	280	18%
2019	1,497	310	0	0	1,808	1,554	254	16%	0	254	16%
2020	1,497	311	0	0	1,809	1,557	252	16%	0	252	16%
2021	1,797	271	0	0	2,069	1,585	484	31%	0	484	31%
2022	1,797	231	0	0	2,029	1,609	420	26%	0	420	26%
2023	1,797	191	0	0	1,989	1,632	357	22%	0	357	22%
2024	1,797	29	0	0	1,826	1,504	322	21%	0	322	21%
2025	1,797	29	0	0	1,826	1,528	299	20%	0	299	20%

Notes:
"Firm Capacity Import" includes OUC's existing and future power purchase agreements, including renewables. As discussed throughout OUC's 2016 10-Year Site Plan, the Stanton Energy Center Unit A (SEC A) purchase power agreement (PPA) with Southern Company-Florida, LLC (SCF) is scheduled to expire September 30, 2023. The PPA includes provisions for capacity reductions beginning October 1, 2018 and extension beyond the September 30, 2023 expiration date. OUC has not made any commitment to extend or terminate the PPA with SCF at this time, but for planning purposes throughout the 10-Year Site Plan, the PPA is shown to expire on September 30, 2023. 40 MW capacity reductions are assumed to occur October 1, 2018, followed by subsequent 40 MW reductions October 1, 2020, October 1, 2021, and October 1, 2022.
"System Firm Summer Peak Demand" includes OUC and St. Cloud peak demand, as well as OUC's power sales to Vero Beach, Bartow, Lake Worth,and Winter Park.
"Reserve Margin (MW)" calculated as Total Available Capacity minus "System Firm Summer Peak Demand."
"Reserve Margin (% of Peak)" calculated as "Reserve Margin (MW)" divided by "System Firm Summer Peak Demand."
"Scheduled Maintenance (MW)" is zero, as no units are scheduled for maintenance during peak periods.

Schedule 7.2
Forecast of Capacity, Demand, and Scheduled Maintenance at Time of Winter Peak

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Year	Total Installed Capacity MW	Firm Capacity Import MW	Firm Capacity Export MW	QF MW	Total Capacity Available MW	System Firm Winter Peak Demand MW	Reserve Margin before Maintenance MW	Reserve Margin before Maintenance % of Peak	Scheduled Maintenance MW	Reserve Margin after Maintenance MW	Reserve Margin after Maintenance % of Peak
FORECAST:											
2015/16	1,543	361	0	0	1,903	1,386	517	37%	0	517	37%
2016/17	1,543	361	0	0	1,903	1,438	465	32%	0	465	32%
2017/18	1,543	362	0	0	1,904	1,407	498	35%	0	498	35%
2018/19	1,543	322	0	0	1,864	1,394	471	34%	0	471	34%
2019/20	1,543	323	0	0	1,865	1,397	468	33%	0	468	33%
2020/21	1,543	283	0	0	1,825	1,415	410	29%	0	410	29%
2021/22	1,855	243	0	0	2,097	1,439	658	46%	0	658	46%
2022/23	1,855	203	0	0	2,057	1,460	598	41%	0	598	41%
2023/24	1,855	20	0	0	1,874	1,323	552	42%	0	552	42%
2024/25	1,855	20	0	0	1,874	1,338	536	40%	0	536	40%

Notes:
"Firm Capacity Import" includes OUC's existing and future power purchase agreements, including renewables. As discussed throughout OUC's 2016 10-Year Site Plan, the Stanton Energy Center Unit A (SEC A) purchase power agreement (PPA) with Southern Company-Florida, LLC (SCF) is scheduled to expire September 30, 2023. The PPA includes provisions for capacity reductions beginning October 1, 2018 and extension beyond the September 30, 2023 expiration date. OUC has not made any commitment to extend or terminate the PPA with SCF at this time, but for planning purposes throughout the 10-Year Site Plan, the PPA is shown to expire on September 30, 2023. 40 MW capacity reductions are assumed to occur October 1, 2018, followed by subsequent 40 MW reductions October 1, 2020, October 1, 2021, and October 1, 2022.
"System Firm Winter Peak Demand" includes OUC and St. Cloud peak demand, as well as OUC's power sales to Vero Beach, Bartow, Lake Worth,and Winter Park.

"Reserve Margin (MW)" calculated as Total Available Capacity minus "System Firm Winter Peak Demand."
"Reserve Margin (% of Peak)" calculated as "Reserve Margin (MW)" divided by "System Firm Winter Peak Demand."
"Scheduled Maintenance (MW)" is zero, as no units are scheduled for maintenance during peak periods.

Schedule 8
Planned and Prospective Generating Facility Additions and Changes

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
				Fuel		Fuel Transport		Const. Start	Commercial In-Service	Expected Retirement	Gen. Max. Nameplate	Net Capability		
Plant Name	Unit No.	Location	Unit Type	Pri	Alt	Pri	Alt	Mo/Yr	Mo/Yr	Mo/Yr	KW	Summer MW	Winter MW	Status
Unspecified	N/A	N/A	CC	NG	DFO	PL	TK	Jun-19	Jun-21	N/A	320	300	312	N/A

Notes:

OUC has no final plans for generating facility additions and changes over the 2016 through 2025 period. However, as discussed throughout OUC's 2016 10-Year Site Plan, OUC is currently projected to require additional capacity to maintain a 15% reserve margin beginning in the summer of 2021. For informational purposes, it has been assumed that new combined cycle capacity would be added to meet this need, and the characteristics of such capacity are presented in this Schedule. OUC has not made any commitments to new capacity additions, and will continue to evaluate its power supply requirements and alternatives as part of its planning processes.

Schedule 9
Status Report and Specifications of Proposed Generating Facilities

(1)	Plant Name and Unit Number:	Unspecified	
(2)	Capacity		
	a. Summer:		300
	b. Winter:		312
(3)	Technology Type:	Combined Cycle	
(4)	Anticipated Construction Timing		
	a. Field construction start-date:	Jun-19	
	b. Commercial in-service date:	Jun-21	
(5)	Fuel		
	a. Primary fuel:	Natural Gas	
	b. Alternate fuel:	Distillate Fuel Oil	
(6)	Air Pollution Control Strategy:	Unspecified	
(7)	Cooling Method:	Unspecified	
(8)	Total Site Area:	Unspecified	
(9)	Construction Status:	OT (Other)	
(10)	Certification Status:	OT (Other)	
(11)	Status with Federal Agencies:	OT (Other)	
(12)	Projected Unit Perfomance Data		
	Planned Outage Factor (POF):		8.8%
	Forced Outage Factor (FOF):		3.0%
	Equivalent Availability Factor (EAF):		88%
	Resulting Capacity Factor (%):		Varies Annually
	Average Net Operating Heat Rate (ANOHR):		6,750 Btu/kWh (HHV)
(13)	Projected Unit Financial Data		
	Book Life (Years):		30
	Total Installed Cost (In-Service Year $/kW):		1,744
	Direct Construction Cost ($/kW):		1,410
	AFUDC Amount ($/kW):		208
	Escalation ($/kW):		126
	Fixed O&M (2016 $/kW-Yr):		10,650
	Variable O&M (2016 $/MWH):		3.85
	K Factor:		1

Notes:

OUC has no final plans for generating facility additions and changes over the 2016 through 2025 period. However, as discussed throughout OUC's 2016 10-Year Site Plan, OUC is currently projected to require additional capacity to maintain a 15% reserve margin beginning in the summer of 2021. For informational purposes, it has been assumed that new combined cycle capacity would be added to meet this need, and the characteristics of such capacity are presented in this Schedule. OUC has not made any commitments to new capacity additions, and will continue to evaluate its power supply requirements and alternatives as part of its planning processes.

Schedule 10
Status Report and Specifications of Proposed Directly Associated Transmission Lines

(1)	Point of Origin and Termination:	OUC's 2016 Ten-Year Site Plan does not include any directly proposed transmission lines. Therefore, Schedule 10 is not applicable.
(2)	Number of Lines:	
(3)	Right-of-Way:	
(4)	Line Length:	
(5)	Voltage:	
(6)	Anticipated Construction Timing:	
(7)	Anticipated Capital Investment:	
(8)	Substations:	
(9)	Participation with Other Utilities:	