

## **ORIGINAL**

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COMMISSION CLERK

August 24, 2005

Ms. Blanca S. Bayó, Director Division of the Commission Clerk and Administrative Services Florida Public Service Commission 2540 Shumard Oak Blvd. Tallahassee, FL 32399-0850

Subject: Addendum to the City of Tallahassee's Ten-Year Site Plan

It has come to our attention that Schedule 1 has expected retirement dates listed for the Purdom GT's that should be reflected in the Generation Expansion Plan. Schedule 8 reflects the changes made per the PSC's request to list retired units as well as prospective generating facility additions.

Sincerely,

Venus Childs Planning Engineer

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### City Of Tallahassee

# Schedule 1 Existing Generating Facilities As of December 31, 2004

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
	<u>Plant</u>	Unit <u>No.</u>	Location	Unit Type	P <u>ri</u>	<sup>F</sup> uel <u>Alt</u>	Fuel Tr <u>Primary</u>	ansport <u>Alternate</u>	Alt. Fuel Days <u>Use</u>	Commercial In-Service Month/Year	Expected Retirement Month/Year	Gen. Max. Nameplate (kW)	Net Cap Summer (MW)	winter (MW)
Ten Year	Sam O. Purdom	7 8 GT-1 GT-2	Wakulla	ST CC GT GT	NG NG NG NG	FO6 FO2 FO2 FO2	PL PL PL PL	WA TK TK TK		Jun-66 Jul-00 Dec-63 May-64	3/11 12/40 3/08 3/09	50,000 247,743 15,000 15,000 Plant Total	48 233 10 10 301	50 262 10 10
r Site Plan	A. B. Hopkins	1 2 GT-1 GT-2	Leon	ST ST GT GT	NG NG NG NG	FO6 FO6 FO2 FO2	PL PL PL PL	TK TK TK TK		May-71 Oct-77 Feb-70 Sep-72	3/16 3/22 3/15 3/17	75,000 259,250 16,320 27,000 Plant Total	76 228 12 24 340	78 238 14 26
,	C. H. Corn Hydro Station	1 2 3	Leon/ Gadsden	HY HY HY	WAT WAT WAT	WAT WAT WAT	WAT WAT WAT	WAT WAT WAT		Sep-85 Aug-85 Jan-86	UNKNOWN UNKNOWN UNKNOWN	4,440 4,440 3,430 Plant Total	4 4 3	4 4 3 11
$\frac{\alpha}{\alpha}$									TOTA	AL SYSTEM CAPA	ACITY AS OF DEC	EMBER 31, 2004	<u>652</u>	<u>699</u>

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#### City Of Tallahassee

Schedule 8
Planned and Prospective Generating Facility Additions and Changes

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Plant Name	Unit <u>No.</u>	Location	Unit <u>Type</u>	l <u>Pri</u>	Fuel <u>Alt</u>	Fuel Trans Pri	portation Alt	Const. Start <u>Mo/Yr</u>	Commercial In-Service <u>Mo/Yr</u>	Expected Retirement <u>Mo/Yr</u>	Gen. Max. Nameplate (kW)	Net Ca Summer (MW)	pability Winter (MW)
Purdom [3]	1	Purdom	GT	NG	DFO	PL	TK		Dec-63	3/08	15,000	10	10
Purdom [3]	2	Purdom	GT	NG	DFO	PL	TK		May-64	3/09	15,000	10	10
Purdom	7	Purdom	ST	NG	DFO	PL	WA		Jun-66	3/11	50,000	48	50
Hopkins [1]	3	Hopkins	GT	NG	DFO	PL	TK	Unknown	Jul-05			47	50
Hopkins [1]	4	Hopkins	GT	NG	DFO	PL	TK	Unknown	Sep-05			47	50
Hopkins [2]	A	Undetermined	СС	NG	DFO	PL	TK	Unknown	May-10 May-11 May-13			25 75 25	25 75 25

- [1] The generating unit Combustion Turbines 3 and 4 are located at the Hopkins plant.
- [2] This combined cycle capability is reflected as an alliance ownership/purchase beginning with 25 MW in May 2010, increasing to 100 MW in May 2011, and 125 MW in May 2013. This capacity could take the form of a new, self-build unit; an asset modification (repowering of an existing conventional oil and gas-fired steam unit to combined cycle operation); an alliance purchase "by wire" (if transmission is available) and/or joint generation project; or a combination thereof. The City's back up plan for this capacity would be to self-build a combined cycle unit.
- [3] A postponement of the planned retirement date until 2010 is currently being evaluated as part of the current integrated resource planning study

Acronym .	<u>Definition</u>
IC	Internal Combustion
GT	Gas Turbine
PRI	Primary Fuel
ALT	Alternate Fuel
NG	Natural Gas
DFO	Diesel Fuel Oil
PL	Pipeline
TK	Truck
WA	Water
P	Planned
U	Under Construction
kW	Kilowatts
MW	Megawatts

#### City Of Tallahassee

#### **Generation Expansion Plan**

	Load Fo	recast & Adj	<u>ustments</u>											
	Fcst		Net	Existing					Reso	ource	:			
	Peak		Peak	Capacity		Firm	Southern		Firm Add	itions	3	Total		
	Demand	DSM [1]	Demand	Net		Imports	Purchase		Exports Cum	ılativ	e)	Capacity	Res	New
<u>Year</u>	(MW)	(MW)	(MW)	(MW)		(MW)	(MW)		(MW) (M	(W)		(MW)	<u>%</u>	Resources
2005	597	2	595	652		11	25 [2	2]	4	ŀ7	[3]	735	24	
2006	609	4	605	652		11			9	)4		757	25	[3]
2007	622	4	618	652		11			9	94		757	22	
2008	632	4	628	652		11			9	94		757	21	
2009	642	4	638	652		11			9	94		757	19	
2010	652	4	648	632	[4]	11			1	19		762	18	[6]
2011	661	4	657	584	[5]	11			19	94		789	20	[6]
2012	671	4	667	584	. ,	11			19	94		789	18	
2013	681	4	677	584		11			2	19		814	20	[6]
2014	690	4	686	584		11			2	19		814	19	- 1

- [1] DSM = Demand Side Management
- [2] Purchase in summer 2005 for 25 MW from Southern Company June 1 Aug 30..
- [3] New resources are to be (2) 47 MW (Summer Net) GE LM6000 aeroderivative ct's
- [4] Reflects postponement of planned retirement of Purdom GT1 and GT2 until May 2010
- [5] Purdom 7 official retirement currently scheduled for March 2011.
- [6] This combined cycle capability is reflected as an alliance ownership/purchase beginning with 25 MW in May 2010, increasing to 100 MW in May 2011, and 125 MW in May 2013. This capacity could take the form of a new, self-build unit; an asset modification (repowering of an existing conventional oil and gas-fired steam unit to combined cycle operation); an alliance purchase "by wire" (if transmission is available) and/or joint generation project; or a combination thereof. The City's back up plan for this capacity would be to self-build a combined cycle unit.

#### **Chapter IV**

#### **Proposed Plant Sites and Transmission Lines**

#### 4.1 PROPOSED PLANT SITE

The City's proposed resource addition to meet system needs in the summer 2010 and beyond is an increasing ownership/purchase of capacity and energy from a new 1-on-1 combined cycle unit beginning with 25 MW in 2010. The ownership increases to 100 MW by the summer of 2011 and to 125 MW by the summer of 2013 to meet the balance of needs throughout the 2005-2014 study period. This is a proposed resource addition as previously mentioned and is not final. Other possible combined cycle opportunities include a self-built unit, an asset modification (repowering of an existing conventional oil and gas-fired steam unit to combined cycle operation) and an alliance purchase by wire (if transmission is available) or a combination thereof. In addition to the CT units previously discussed, any of the contemplated combined cycle unit options could be accommodated at the City's existing Hopkins Plant Site. It is also possible that a new "green field" site might be identified if the self-build option is pursued (see Tables 4.1 - 4.3: Schedule 9).

#### 4.2 TRANSMISSION LINE ADDITIONS/UPGRADES

Internal studies of the transmission system have identified a number of system improvements and additions that will be required to reliably serve future load. The attached transmission system map (Figure D1) shows the planned transmission additions covered by this Ten Year Site Plan.

Over the last decade, the City has experienced significant growth and development, and a corresponding increase in the demand for electricity. This has been especially true in the fast growing eastern portion of the City and adjacent Leon County where development has outpaced the construction of electric transmission lines and substations. The only acceptable and permanent way of providing a reliable source of electricity and providing for continuing growth to the eastern part of Tallahassee is to