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Testimony of Steve Urse

On behalf of

Intervenor Rebecca Armstrong

Docket No. 060635-EU

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FPSC-COMMISSION CLERK

1 **Q: Please state your name and address.**

2 A: My name is Steve Urse. I live at 1118 Waverly Rd, Tallahassee, F 32312.

3 **Q: Please summarize your education and experience.**

4 A: I hold an A.B in Economics from Indiana University, and an M.B.A. in finance and a J.D.
5 degree from the University of Florida. Exhibit SU-1 is an overview of my professional and
6 volunteer experience.

7 **Q: Have you been involved in planning issues involving electric utilities?**

8 A: Yes, since May 2005 I and other members of the Big Bend Climate Action Team have been
9 engaged in a successful collaborative effort with the staff of the electric utility of the City of
10 Tallahassee concerning development of the integrated resource plan to guide acquisition of energy
11 resources by our city's electric utility.

12 **Q: What is the Big Bend Climate Action Team?**

13 A: The Big Bend Climate Action Team (BBCAT) is a group of citizens with extensive experience
14 in a variety of fields, including energy, the environment, economics, and law. Due to concern
15 about global warming, we united in a common mission:

16 "to help local governments, businesses, and citizens in Florida's Big Bend do their share to abate
17 climate change by reducing fossil fuel use and promoting energy efficiency, conservation, and
18 renewable fuels in power plants, buildings, and vehicles."

19
20 The impetus for BBCAT's formation was a church group that spent more than five years working
21 towards a national accreditation to become a Green Sanctuary, a multifaceted approach to
22 becoming Earth friendly. In February 2005 the group started studying the impacts of global
23 warming and potential solutions, organizing and participating in educational meetings with
24 various experts about climate/ energy topics.

25 **Q: Please describe the BBCAT's collaborative work on the city's IRP.**

1 This collaborative effort commenced when BBCAT began meeting regularly with
2 Tallahassee's Electric Department staff in May of 2005 and is ongoing. I note that BBCAT first
3 learned of the coal plant that is at issue in this case when Tallahassee's possible participation was
4 publicly announced in June 2005.

5 In July 2005, the Tallahassee City Commission voted to support preservation of
6 Tallahassee's participation in the Taylor County coal plant proposal as a possible option in the
7 IRP. In addition, the city commission directed utility staff to "continue the collaborative work
8 currently underway..." and to hire clean energy experts to help "develop an enhanced energy
9 strategy emphasizing cost effective efficiency, alternative energy technology, and renewable
10 resources..." Thereafter, the collaborative effort engaged in an earnest search for cost effective
11 clean energy options, with input from the city's utility staff and clean energy consultants and
12 BBCAT – building from successful examples at other utilities. Through this work, 162 MW of
13 additional cost effective Demand Side Management resources were identified and 38 to 75 MW
14 of cost effective biomass was identified – an amount that exceeds Tallahassee's 150 MW share in
15 the proposed Taylor County pulverized coal plant at issue in this case.

16 At a city commission meeting in June 2006, staff advised the commission that the city's
17 experts had identified 167 MW of DSM whose acquisition would lower the total costs of each of
18 the candidate IRP plans being considered. Please review Exhibits SU-2 and SU-3 which I have
19 presented with this testimony. On August 23, 2006, the city commission voted to acquire the least
20 cost Demand Side Management resources identified by the city's experts, which I will refer to as
21 the "least cost DSM". According to the city's calculations, acquiring the first 100 MW of this
22 least cost DSM meets the city's need for additional capacity until 2016, as confirmed in Exhibit
23 SU-4.

24 On October 11, 2006, the city commission voted to acquire 38 MW of biomass, with an
25 option to increase to a total of 75 MW of biomass from a company called BG&E. The operation

1 date is expected to be June 2010. According to the city's calculations, this biomass also lowers
2 the cost of each candidate IRP plan under consideration by the City of Tallahassee, as confirmed
3 in Exhibit SU-5. The city has not provided a calculation to show how much longer this biomass
4 energy acquisition will defer the city's need for additional capacity when considered as an
5 addition to the previously described DSM programs. The city continues to evaluate acquiring
6 more biomass, as shown in Exhibit SU-6.

7 Before these 162 MW of least cost DSM and 38 to 75 MW of least cost biomass were
8 identified, the analysis of the city's staff and other city consultants indicated that the city needed
9 additional capacity of 150 MW in 2012 and they stated their belief that little-to- no additional
10 DSM or biomass options were available to cost-effectively meet any portion of that additional
11 capacity need, as confirmed in Exhibit SU-7.

12 **Q: Please summarize your testimony:**

13 A: Based on my participation in this collaborative IRP effort I have observed that: 1) Before
14 hiring consultants with expertise in DSM and renewables, the city staff, based on reports from city
15 consultants, had indicated that the city was already acquiring virtually all of the DSM and
16 renewables that was cost effective. 2) With the help of clean energy consultants, the city
17 identified and now plans to acquire 162 MW of additional DSM that the staff and consultant of
18 the city found will significantly reduce total costs of meeting energy service needs in the service
19 area of the city utility. 3) Upon learning that the city was interested in adding biomass to its
20 energy mix, biomass providers contacted the city and the city now plans to acquire between 38
21 and 75 MW of biomass, at a cost that is less than other energy supply or demand side options.
22 Based on these observations, it is my hope that the Florida Public Service Commission will ensure
23 that the other participating utilities fully evaluate the potential for DSM and renewables to meet
24 energy needs at a cost that is less than the proposed pulverized coal plant.

25 **Q: Does that conclude your testimony?**

1 A: Yes, it does.

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Urse bio

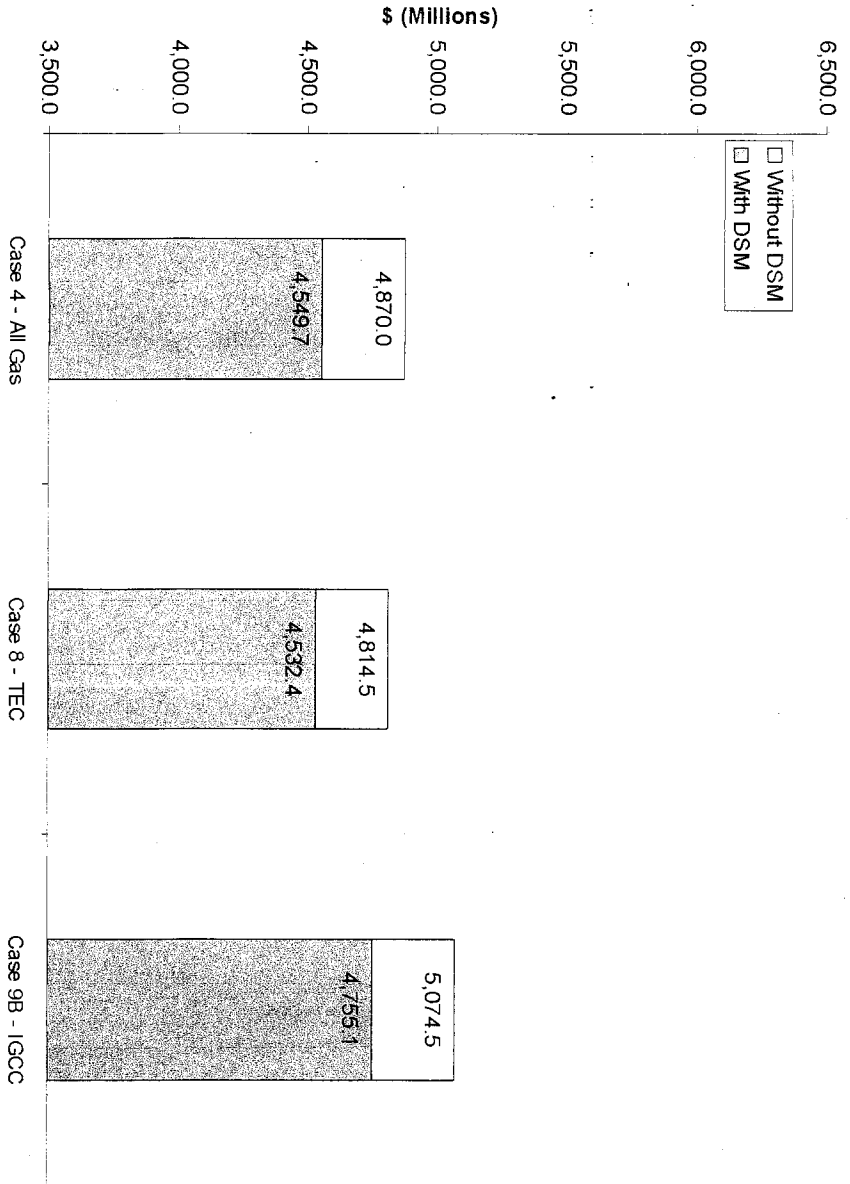
Steve Urse retired from 24 years in the criminal justice system in 2003, with the first 7 as a prosecutor/trial attorney in Sarasota and the remainder as a prosecutor coordinator for all the state prosecutors. In that role he was the Executive Director of the Florida Prosecuting Attorneys Association and managed an office that provided continuing legal education, legislative support for over 1600 prosecutors. He also sought and managed grants that led to an expansion in staff and programs, primarily in DUI/DUI Manslaughter and Violence Against Women.

After getting an AB in Economics from Indiana University in '66 and being commissioned a 2nd Lieutenant through ROTC, he served in the US Army Signal Corps in Germany, Viet Nam and the US. He attained the rank of Captain. Afterwards he taught math in public schools in Gary IN and Sarasota FL. He then obtained an MBA in Finance '74 and JD from the University of Florida '77.

Since the early 90's his volunteer passion has been environmental work, primarily focusing on environmental education and clean water issues and more recently global warming/clean energy/clean air. After retirement, he completed the master Gardener program at the County Extension/UF-IFAS and worked on various landscape projects.

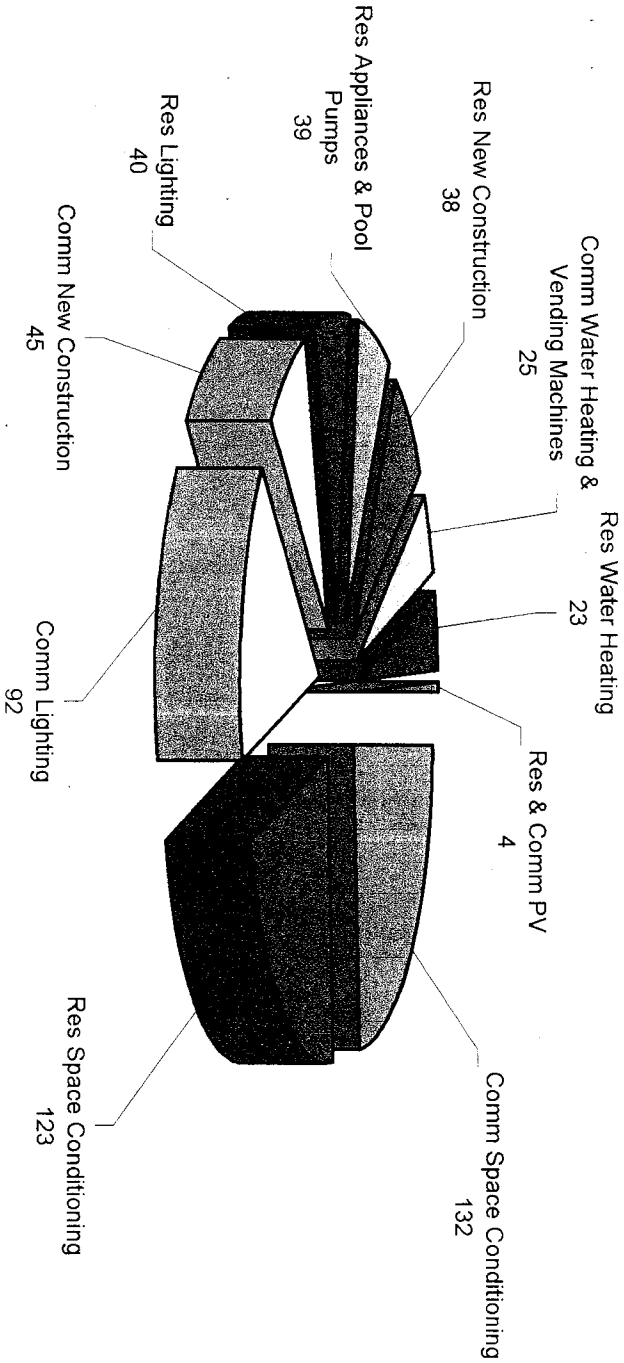
He is a past chair of Big Bend Sierra Club and former member of the Sierra Chapter Executive Committee. He is a founding member of the local environmental/growth management alliance, the Big Bend Environmental Forum, www.bbef.org, in existence since 1995. He has chaired that organization for the last three years. That organization sponsors educational and candidate forums and networks on issues. He is a past chair of the Unitarian Universalist Church of Tallahassee, Green Sanctuary Committee, www.nettally.com/uuct/. That church is one of only 50 in the US (out of over 800) that have obtained accreditation as a Green Sanctuary. A church study group formed to study Global Warming (climate disruption) led to gathering interested citizens to form what became the Big Bend Climate Action Team, www.bbcatt.org. That Team has been working with the City of Tallahassee and Leon County to develop sustainable clean energy/renewable alternatives.

Potential Impact of DSM – Total Plan Costs



Energy Savings

Residential & Commercial Energy Savings Potential by 2026 (GWh)

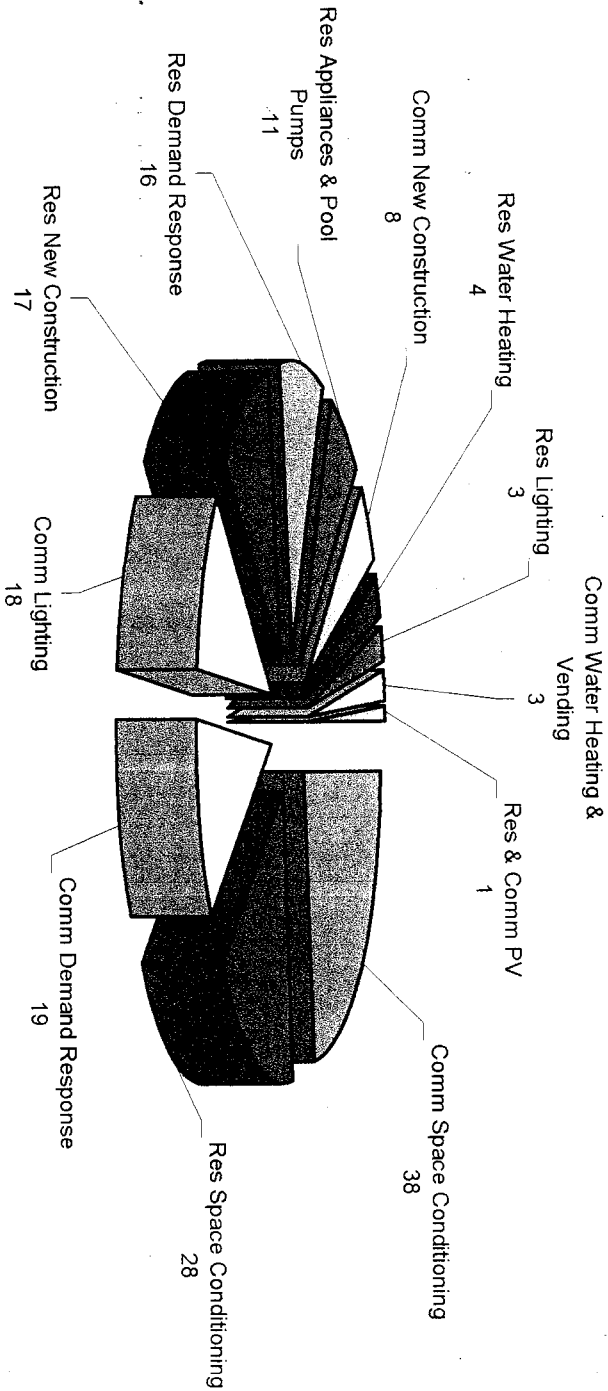


Total Savings = 561 GWh



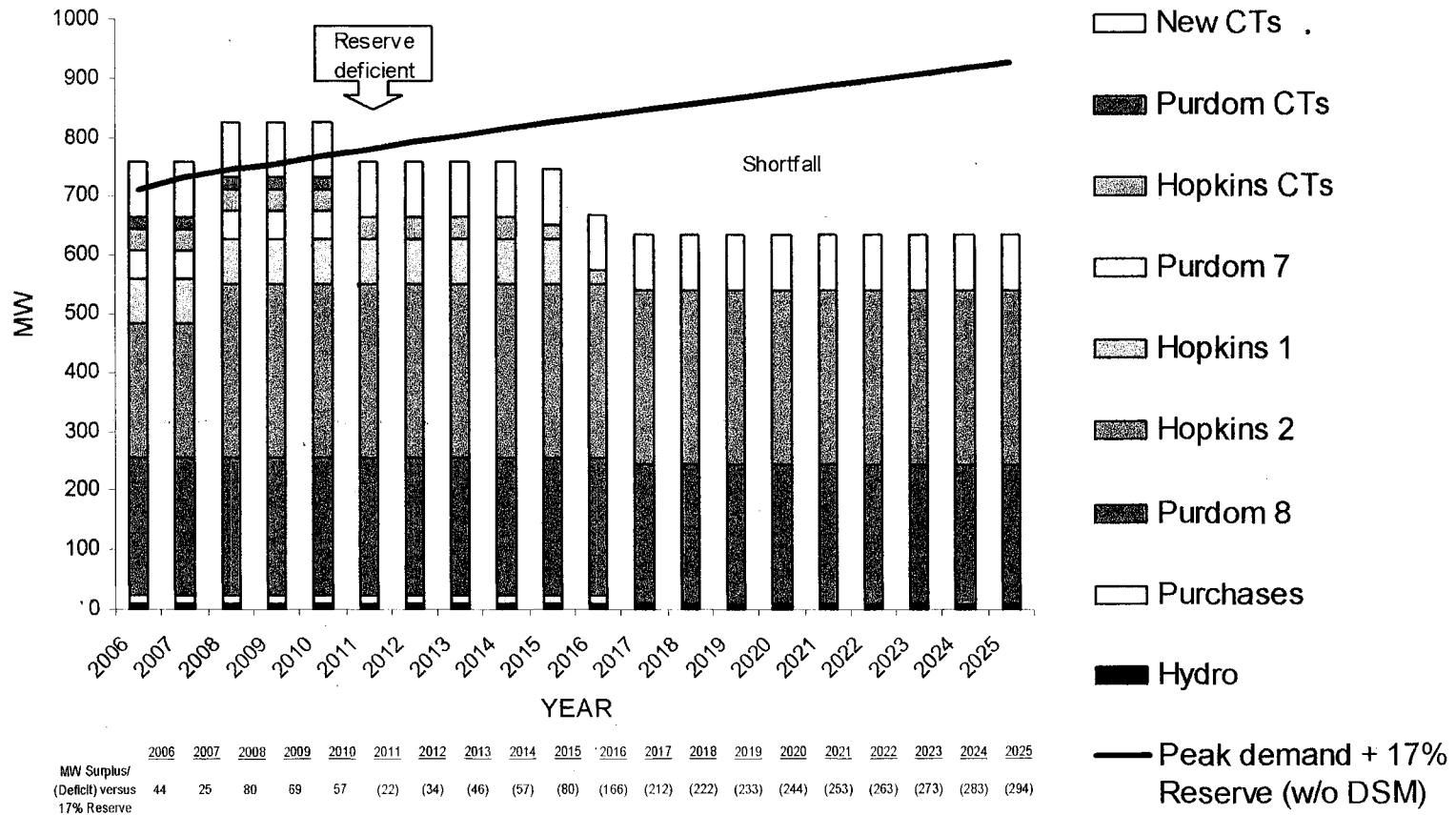
Demand Reduction

Residential & Commercial Demand Savings Potential by 2026 (MW)

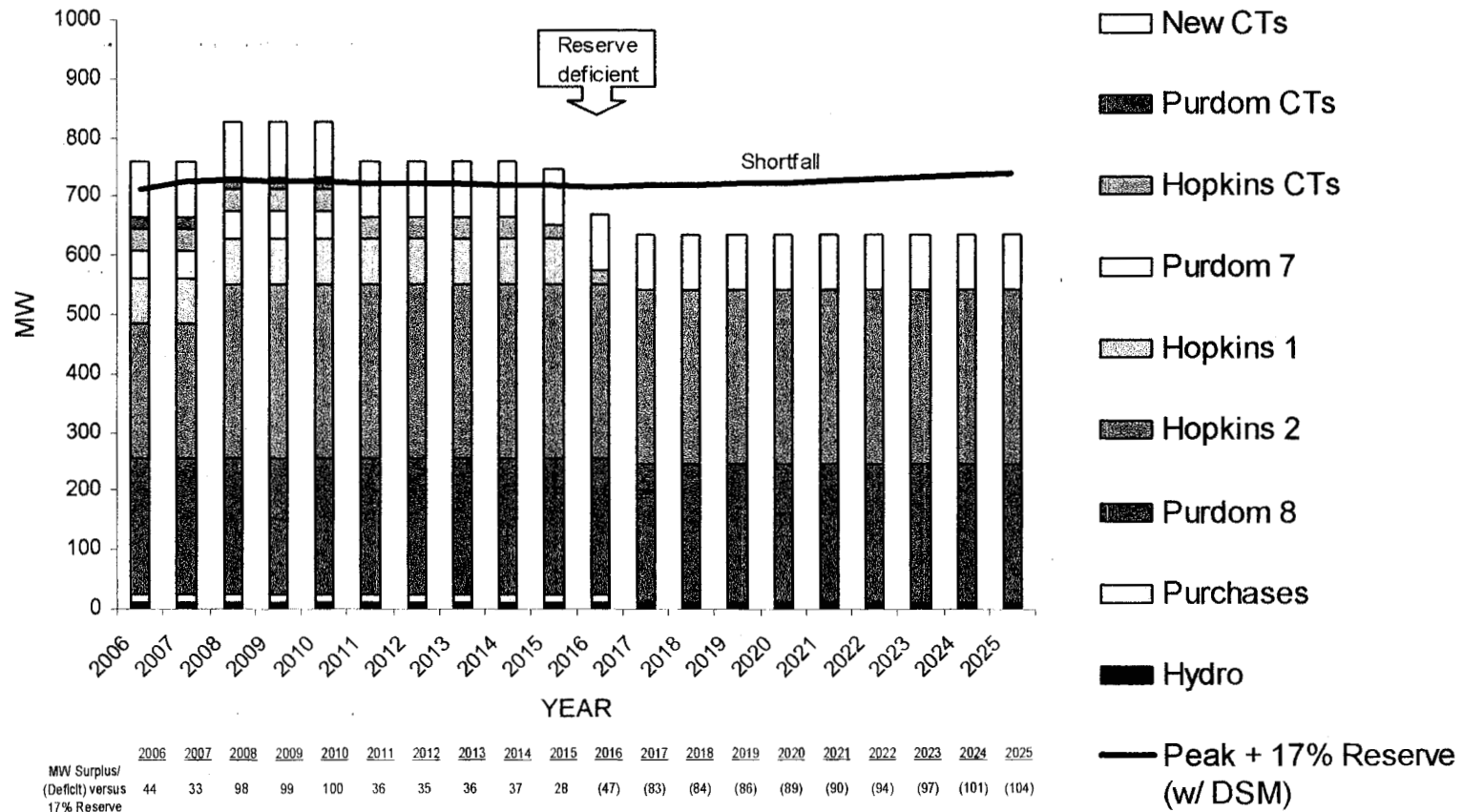


Total Savings = 167 MW (132 MW w/o DR)

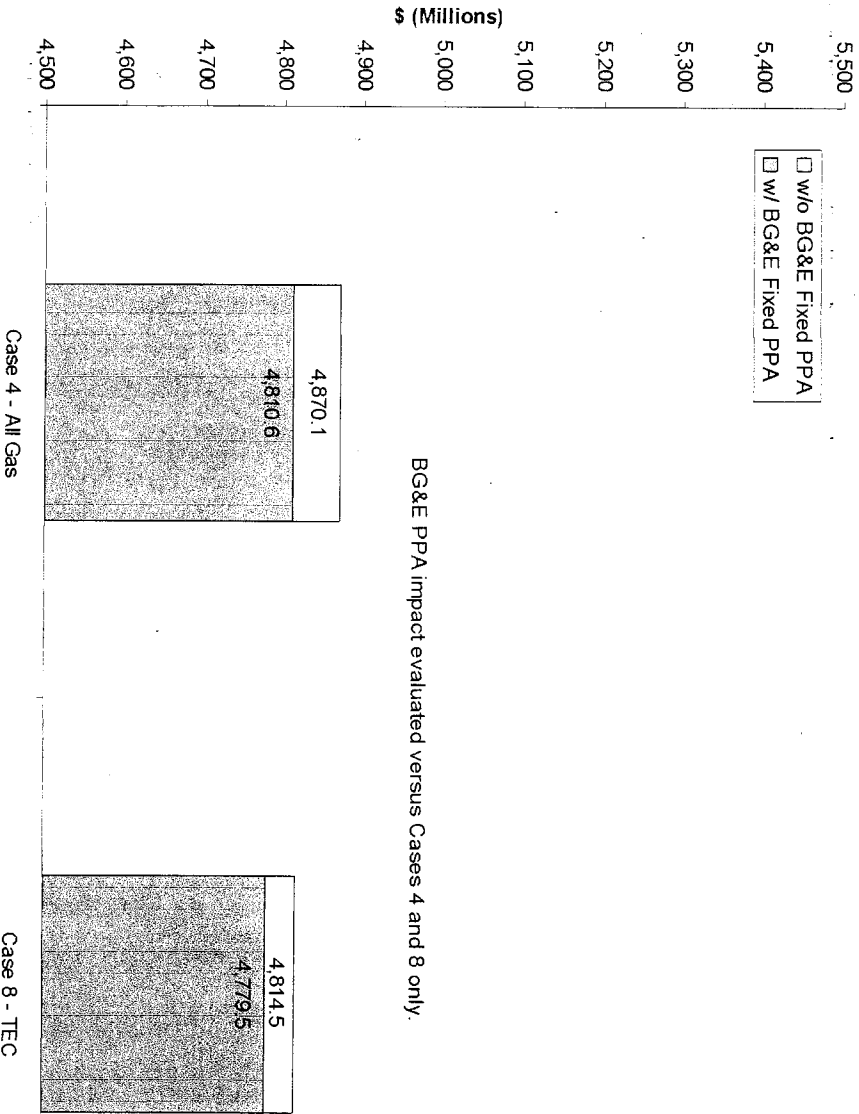
Tallahassee power resources are expected to fall short as early as 2011



With aggressive new conservation and energy efficiency programs, the need for new power supplies could shift to 2016



Potential Impact of BG&E on Selected Cases



Biomass Power Production

- Plasma Arc/Torch
- Advanced Gasification
- Rotary Kiln
- Conventional Combustion
- SilvaGas
- Klepper Process

Biomass Power Plants and Net Sales, Top Ten States, 2004- all conventional combustion

State	Number of Operating Plants, 2004	Net Sales Generation, MW
California	23	588
Maine	7	184
Michigan	7	168
Florida	4	144
Washington	3	93
Virginia	2	80
Vermont	2	70
New Hampshire	4	51
Pennsylvania	3	50
North Carolina	3	58

About 64 operating plants in ten states sell 1,471 total MW capacity of biomass-- about 88% of US total. Average plant size is about 23 MW.

Largest Existing Biomass Electric Power plants in SE (all direct combustion)

- **New Hope Energy Partners**, South Bay, FL
 - 74.9 MW (net) biomass- sugar cane residue and wood
 - Expanding to 125 MW in 2007
- **Dominion Power**, Pittsylvania VA
 - 80 MW (gross) forestry and wood waste
- **Craven County Wood Energy**, New Bern NC
 - 48 MW (net), forestry and wood waste
- **Wheelabrator Ridge Energy Inc.**, Auburndale FL
 - 45 MW (gross) wood waste and tires

Biomass Co-fired with Coal

- Test burn at TECO's 220 MW coal gasification in 2004- up to 3% biomass appears acceptable
- Switchgrass being co-fired at Southern Company's Gadsden AL site- selling green power from capacity
- JEA performed tests of co-firing biomass in the past
- TECO co-fired biomass at old Gannon Generating Station- (B&W cyclone units)- before converting station to natural gas in 2001.

Plasma Torch Technology

- Represented by Green Power Systems, LLC (GPS), Jacksonville, Florida
- Requires 6 MW's of electric service
- Production of electricity on site
- 8 MW Plant in Japan, no full scale plants in US for electrical production

Advanced Gasification

- Represented by BRI Energy (BRI), New Smyrna Beach, Florida
- Uses Microorganisms to ingest CO2 and produce Ethanol, H2 and H2O
- Primary production is ethanol with production of electricity as by-product
- Small scale prototype in Arkansas - ethanol only, no electric power production

Rotary Kiln Technology

- Represented by TriEnCon, LLC, Texas
- Process of "Zeros"
- Production of electricity on site
- Qualifies as Clean Coal Technology
- Proposes 50-600 MW Clean-Coal or Waste-to-Energy Generating Facility

Conventional Combustion

- Direct Combustion on grate or in fluidized bed
- Facilities in South Bay, Auburndale, Monticello and Telogia
- Waste Wood and yard waste principal fuels
- Crop Residues, waste paper, also used
- Clean Construction & Demolition Waste Wood permitted in all facilities
- Some delivered wood waste requires chipping and grinding

SilvaGas & Klepper Technologies

- Represented by Biomass Gas & Electric, LLC, Norcross, Georgia
- Proposes a 30 MW or 75 MW plant
 - A full scale demonstration of the SilvaGas process in Burlington, Vermont (syn-gas production only - FERCO project) Shutdown over 4 years ago
 - Pilot plant of the Klepper Process in Denver (syn-gas production only)

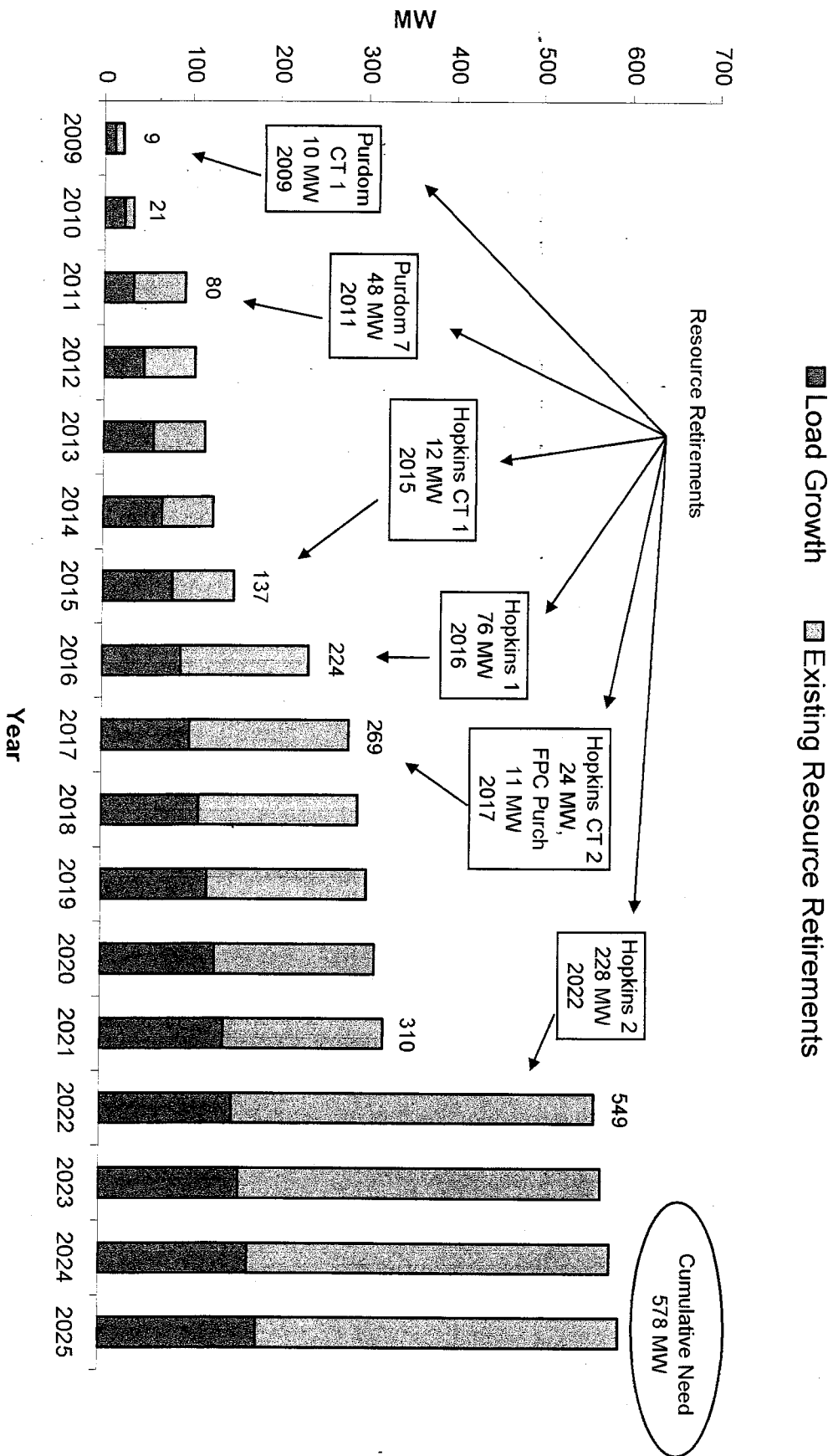
Advanced Gasification and Pyrolysis Varied Fuels

- Municipal Solid Waste
- Pet Coke
- Coal
- Bio-Hazardous Waste
- Tires & ASR -car fluff
- Sludge: Sewer, Chicken/Cow/Hog Manure
- Wood, Timber Slash & Yard Waste
- Waste Oil/PCBs, Motor, Cooking Oil & Grease

In Summary

- A contract with BG&E was approved on October 11, 2006 by the City Commission
- Staff is continuing to seek out new projects
- Staff is continuing the evaluation process of the varying technologies

Need For Power



System Supply and Demand

