Composite - RPS Response Sheet - August, 15th Meeting — **PHOTOELECTROCHEMICAL**

SOURCE		Company Name:		Progress Energy Florida	**Composite****
		Applicable Utility Service Area	(if any)		
		Energy Resource:	(Individual Type)	Photoelectrochemical (H2)	Photoelectrochemical (H2)
		Energy Resource Type:	(Category)		
		Resource Scale	(Unit or Aggregate)		
		Unit Status	(Existing or Planning)		
COMMERCIAL AVAILABILITY		Typical Unit Annual Capacity Rating	(MW)	0.002	
		Earliest Commercial In-Service Date	(Year)	2011	
		Typical Construction & Permitting Time	(Years)	1	
		Useful Life of Unit	(Years)	25	
		Fuel Type		Solar Energy	
PERFORMANCE CHARACTERISTICS		Contribution to Summer Peak Demand	(MW)	.0015 - .0076	
		Contribution to Winter Peak Demand	(MW)	0	
		Average Annual Heat Rate	(BTU/kWh)	n/a	
		Equivalent Availability Factor	(%)	15	
		Average Annual Generation	(MWH)	2 to 12	
		Resulting Capacity Factor	(%)	15	
ENVIRONMENTAL CHARACTERISTICS	Emission Rates	Carbon Dioxide (CO_2)	(lb/kWh)	See Note (which note?)	
		Sulfur Dioxide (SO_2)	(lb/kWh)	Negligible	
		Nitrogen Oxide (NO_X)	(lb/kWh)	Negligible	
		Mercury (Hg)	(lb/kWh)	Negligible	
		Water Usage	(gal/kwh)	Unknown	
ESTIMATED COST DATA		First Year of Commercial Operation	(Year)	2010	
	Installed Capital	Cost[1]	($/kw)	17000	
		Escalation Rate	(%)	3	
	O & M - Fixed	Cost[1]	($/kw-year)	20	
		Escalation Rate	(%)	3	
	O & M - Variable	Cost[1]	($/kwh)	0.001	
		Escalation Rate	(%)	3	
	Fuel	Cost[1]	($/kwh)	n/a	
		Escalation Rate	(%)	n/a	
		Discount Rate	(%)		
		Levelized Cost[2] - Life of Unit	(cents/kwh)	128	

FOOTNOTES / ADDITIONAL NOTES

Technology not commercial, insuffiicient data for predicition - no Composite submitted