

## ECE 333 Green Electric Energy

### Homework 10

#### Solve the following problems:

Problem a. Consider a 100-MW CSP with the maximum power block input of 280 MW<sub>t</sub>,  
**determine** the physical capability of the 6-h TES and **explain** what the 6-h TES  
implies for the 100-MW CSP

Solution:

Since the storage capability is defined by the ratio of physical capability and the  
maximum power block input; we can determine that the physical capability is :

$$6 * 280 = 1,680 \text{ MWh}_t$$

A 6-h TES for the 100-MW CSP implies: without the absorbing solar energy, the plant  
can generate electricity at the capacity of 100 MW for 6 hours if the storage is full at  
the beginning