

**CPET 581 Smart Grid & Energy Management
Homework 6**

Assigned Date: Oct. 19, 2013, Due Friday Oct. 25, 2013, before 5 PM.

Hand-in requirement and Due Date:

- Submit your **hw6-part-1.docs** file as email attachment to Prof. Lin lin@ipfw.edu
- Submit the team's first "**System Design Report**", and prepare to make the team's presentation.

Part 1 (Individual Assignment)

Choose two different smart grid projects and/or demos mentioned in Oct. 18's lecture notes, study the selected demos/reports, extract key points, copy needed diagrams, to prepare a PPT presentation of about 20 slides. And prepare to make your presentation in our Oct. 25's class meeting.

Part 2 (Team-based) EV & Plug-in EV Charging Station Development Project

- (A) Prepare a meeting minute for team meeting on Oct. 18; (a summary on discussion and follow-up items should be added)
- (B) Team member roles assignment: Greg – General Manager, Ryan – Co-General Manager of Marketing & Sales, Bob – Manager of System Hardware, Peter – Manager of System Software
- (C) Design a diagram that shows all major components of the conceptual new EV & Plug-In EV Charging station which should include the following subsystems
 - a. Charging System Hardware system, with proper specification such as Charging Capacity (kWH), Voltage, Current, Level of Charging, etc
 - b. Power sources including, utility, power source, solar power rating, wind power, etc
 - c. Smart Grid Communication subsystem AMI, communication protocols, etc
 - d. User interface and service fee payment methods
 - e. Other features
- (D) Complete team project subtasks assignment (use either Microsoft Project or Excel Spreadsheet); each team member should also create a set of needed subtasks assignment, and give a status of the progress
- (E) Prepare a Report in PPT file for team discussion