

## Worksheet 3, October 18, 2016

I advise you to work through the following problems /questions well and as a group (make sure though that no one is free-riding); it's the ticket to performing reasonably well on the exams. Number of points indicates the expected scope of the answer (should roughly correspond to time in minutes).

1. **[10 points]** Explain what are the possible (practical) problems with implementing Pigouvian taxes and Standards and charges? Illustrate with a real-world example.
2. **[20 points]** Briefly summarize the main objectives and main results of Plott (1983). Also explain:
  - a. How does the author model externality in his experimental market?
  - b. How are the individual interventionist solutions implemented in his experimental market?
  - c. Why are the results for the standards solution noisy?
3. **[10 points]** "Among economists at least, the use of tradable emission allowances under an aggregate emission cap is generally considered a mature policy technology. It has become the default policy option in controlling a variety of large scale air emissions and is being increasingly considered for replacing inefficient source-specific regulation of water pollutants." [Porter et al. p.190] Discuss.
4. **[10 points]** What is EU ETS? Briefly describe how it works, what are the main features.
5. **[5 points]** What happened in 2006/2007 to the prices of EUAs and why did it happen?
6. **[15 points]** What distinguishes the second phase of the EU ETS from the first phase? Discuss in light of incentives for efficiency on both micro and macro level. Do you think that the third phase, as it is proposed now, can do even better job in enhancing innovation and investment into cleaner technologies? Explain why.
7. **[10 points]** Why is auctioning off (rather than free-allocation) EUAs not necessarily a bad thing, even if that means that consumers might have to pay higher prices (initially) for, say, electricity? How auctioning off helps to improve incentives for innovations (provide at least two examples of possible effects, as in Schleich et al. and explain).
8. **[5points]** Explain why tax policy doesn't do a very good job in enhancing innovation and investment into cleaner technologies. Which of other measures/policies that we discussed would do a better job? Explain.