



# LEGI

## Laboratoire d'Economie et de Gestion Industrielle

Laboratoire de Recherche Universitaire (SERST-MES) LAB-LR99ES22

ECOLE POLYTECHNIQUE DE TUNISIE

### *SEMINAIRE D'ECONOMIE*

<http://www.tn.refer.org/legi/Seminaire.html>

**Vendredi 21 mai à 15 h à la Salle EC14**

**Tahar ABDESSALEM**

LEGI- EPT et FSEG Tunis

### ***"Energy Externalities: Implementation of ExternE methodology to Tunisian case"***

#### *Abstract:*

The paper presents a Tunisian implementation of ExternE method. At the base of the work lies the determination of external costs for some reference electric power technologies, fossil fuel based. Three kinds of impacts are considered: impacts on health, GHG emissions, and impacts on agricultural productivity;

The results are used in a twofold objective:

- i) perform a Cost Benefit Analysis comparing a wind plant for electricity production and an alternative conventional situation, with, in particular, a sensitivity analysis considering main variables subject to large variability: discount rate, CO2 price and wind speed;
- ii) then offer a data basis for internalisation discussion and optimal environment regulation policy debate. Standard economic theory recommendation for price-based internalization, with fiscal instruments, is to charge over competitive market price a tax equivalent to external costs. This is also the basic assumption of the Environmental Tax Reform approach. However, economic situations are generally far from this nice case and oppose difficulties to implement this recommendation, particularly in the Tunisian situation where energy prices are strongly subsidized.

**Key words:** energy externalities, energy project evaluation, environmental tax reform, climate change

**JEL:** Q51, Q42, H23, H43

Responsable de la Coordination du Séminaire

**Moez EL ELJ**, ISG Tunis/LEGI-EPT/ Tél: 71 774 611 - Poste 254 / E-mail : [moezelj@yahoo.fr](mailto:moezelj@yahoo.fr)