**Environmental and technology externalities: policy and investment implications**

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**Background and purpose of Power Point Presentation**

**BACKGROUND**

When appraising the cost and benefits of projects, public institutions – such as the European Investment Bank – take into account externalities. In the case of energy projects, the shadow pricing of environmental externalities is a key issue. In addition, projects may involve technology externalities, notably knowledge spillovers and external benefits associated with learning-by-doing (e.g., production of PV equipment) and learning-by-using (e.g., the use of PV).

Technology externalities might be particularly relevant for new, still fairly expensive renewable technologies (e.g., solar thermal power) while they seem to be less relevant for mature renewable technologies (e.g., on-shore wind) and traditional fossil fuel technologies, which renewables aim to replace.

**PURPOSE**

Against this background, the purpose of the presentation (and the paper) is to critically examine

- the economic rationale for promoting new ‘clean’ energy technologies,
- the usefulness of empirical experience curves in assessing this rationale
- how this rationale could be taken into account in the economic appraisal of projects based on new renewable energy technologies.

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**SOME OBSERVATIONS ON THE PAPER (which will be broader than the presentation)**

**Draft outline**

1. Introduction/Motivation
2. Learning curves: concepts and empirical evidence
3. The economics of strategic deployment
4. Taxonomy of environmental polices and their impact on technological change
5. Policy implications of interaction between environmental and technology externalities
6. Investment and appraisal implications of interaction between environmental and technology externalities
7. Conclusions

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