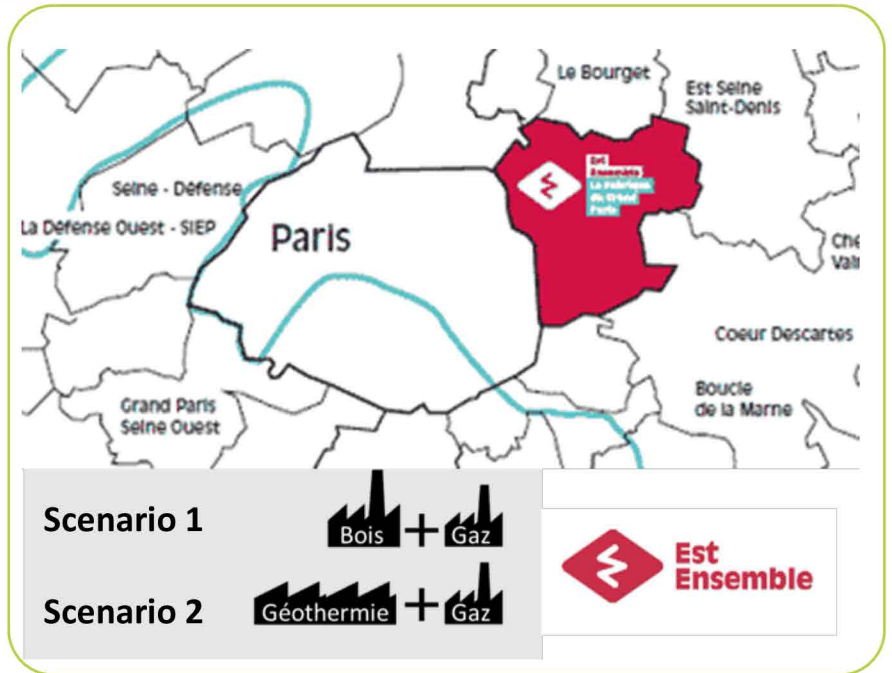


Identification and valuation of the externalities of an urban district heating project

URBAN PROJECT PERFORMANCE EVALUATION

Client: EPT Est Ensemble

Year: 2016 – 2017



Moving from techno-economic to socio-economic analysis

Context

As part of a research project dedicated to innovative economic models, Efficacity is working on the optimisation of economic flows generated by energy transition in urban territories, in particular thanks to the identification and valuation of externalities (also known as co-benefits) during the evaluation of a project.

The method developed by Efficacity is designed to provide decision-making support to territorial agencies in their choice of energy solutions. The approach goes beyond classic market models and offers a method for the socio-economic evaluation of projects, taking into account the externalities and the potential for the creation of economic, societal and environmental value.

Mission

On the basis of the opportunity study conducted by engineering consultancy Inddigo, the Etablissement Public d'Est Ensemble invited Efficacity to apply this new kind of economic analysis to a project to develop district heating.

Methodology

The study was based on several methodologies, scientific publications and dialogue with stakeholders. The aim was to highlight, on an objective basis, the advantages arising from the district heating project on the Est Ensemble territory and to compare two energy supply scenarios:

- Biomass heating plant;
- Geothermal plant.

Results

Numerous externalities were identified, relating to emissions and health, conservation of finite resources, energy insecurity, transport of fuel (wood), job creation, freeing extra living space, impact on soils, safety, etc.

The health and environmental costs of the geothermal solution were much lower than for the biomass solution.

In any event, the choice of district heating brings economic advantages such as, for example, freeing more space in apartments (by avoiding the need for individual boilers).

key words

Socio-economic analysis
Co-benefits

Externalities
Overall cost
District heating