



Internship Proposal: Investigation of strategies for PV steering - presence of local offtake / batteries / other RES production assets

Background

Irex Consulting is a business engineering consultancy company specialized in the energy & utility sectors. We are experts in tackling operational business challenges across the entire value chain – production, sourcing & trading, grids, and supply.

Assignment

As the share of solar energy grows in Belgium, optimizing the operation of photovoltaic (PV) assets becomes increasingly important to maximize efficiency and economic returns. The way PV production is managed – whether through direct grid injection, self-consumption, or battery storage integration – can significantly impact both energy costs and grid stability.

This internship will focus on evaluating different strategies for optimizing PV asset steering with the presence of local offtake. The study will compare approaches such as residual injection steering versus full production steering and later examine the integration of batteries and other renewable energy sources (RES). The goal is to develop a framework for selecting the most efficient operational strategies under different grid and market conditions.

Through this research, the intern will gain valuable insights into:

- The impact of different PV steering strategies on self-consumption and grid interaction
- How battery storage and hybrid RES integration affect flexibility and profitability
- Key factors influencing PV asset optimization in different market environments
- Practical approaches for balancing economic returns with grid balancing

By exploring these strategies, the findings will contribute to more effective PV asset management, supporting market participants, such as end-customers, suppliers, balance responsible parties, in adapting to an increasingly decentralized and renewable-driven energy system.

Objectives

- A brief market study on the current offering for steerable PV and batteries in Belgium;
- Exploring valuation modelling for PV steering strategies by extending existing net PV injection valuation models;
- A comprehensive report outlining the conducted research;
- A conclusive presentation to irex Consultants aimed at augmenting their understanding of trends for PV steering in the current energy market context, guided by insights from the research.

Preparation Material

- Relevant Irex training material will be provided

Schedule Beginning of July -- End of August (Flexible)

Contact

Patrick Larin

Contact patrick.larin@irex-consulting.com

Website <http://www.irex-consulting.com/>