



Marketing green flexibility: The case of Flecopower



Agenda

- **Background Fleco Power**
- Marketing sustainable flexibility – Ancillary services
- Marketing sustainable energy – Direct marketing



Fleco Power was founded to support independent electricity producers in the transition to a renewable, decentralized energy system



Gemeinsam für den Strom von morgen.



The key to an economical operation of renewable production units lies in a comprehensive marketing of all potentials





To unlock these potentials Fleco Power operates the first virtual power plant in Switzerland with exclusively new renewable energies¹



- Using the virtual power plant, we are **in the market** providing **sustainable ancillary serves around the clock**
- Our experience shows that **decentralized production units** can be **efficiently marketed and controlled through a central stakeholder**

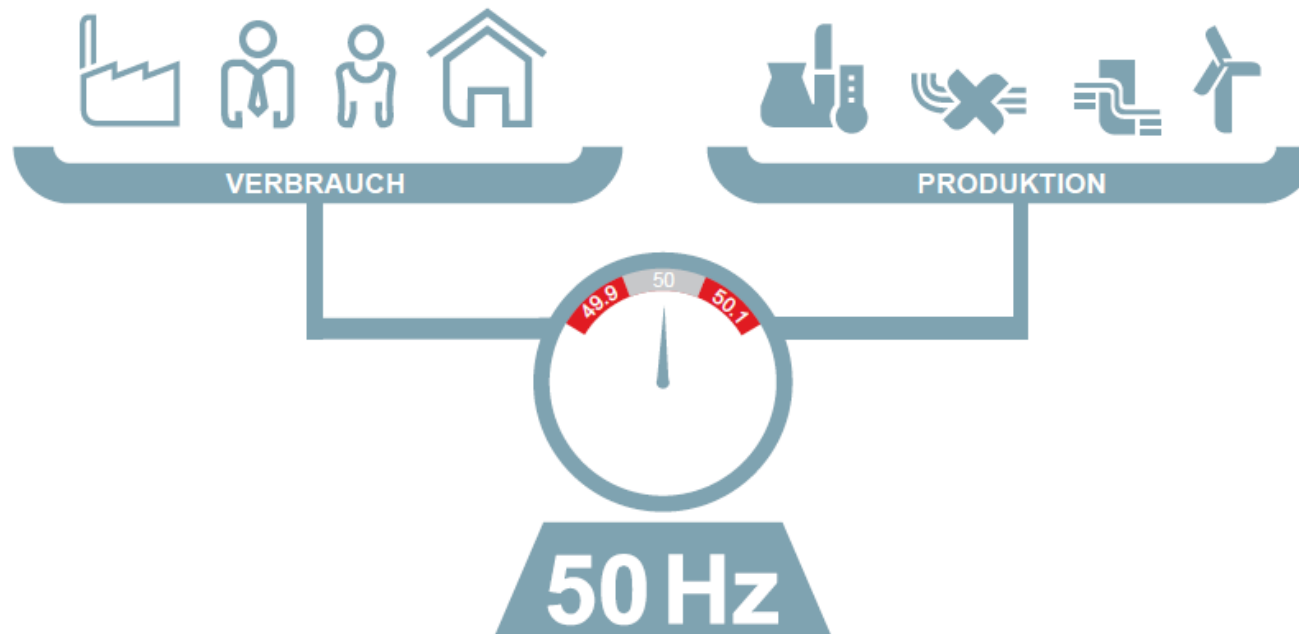


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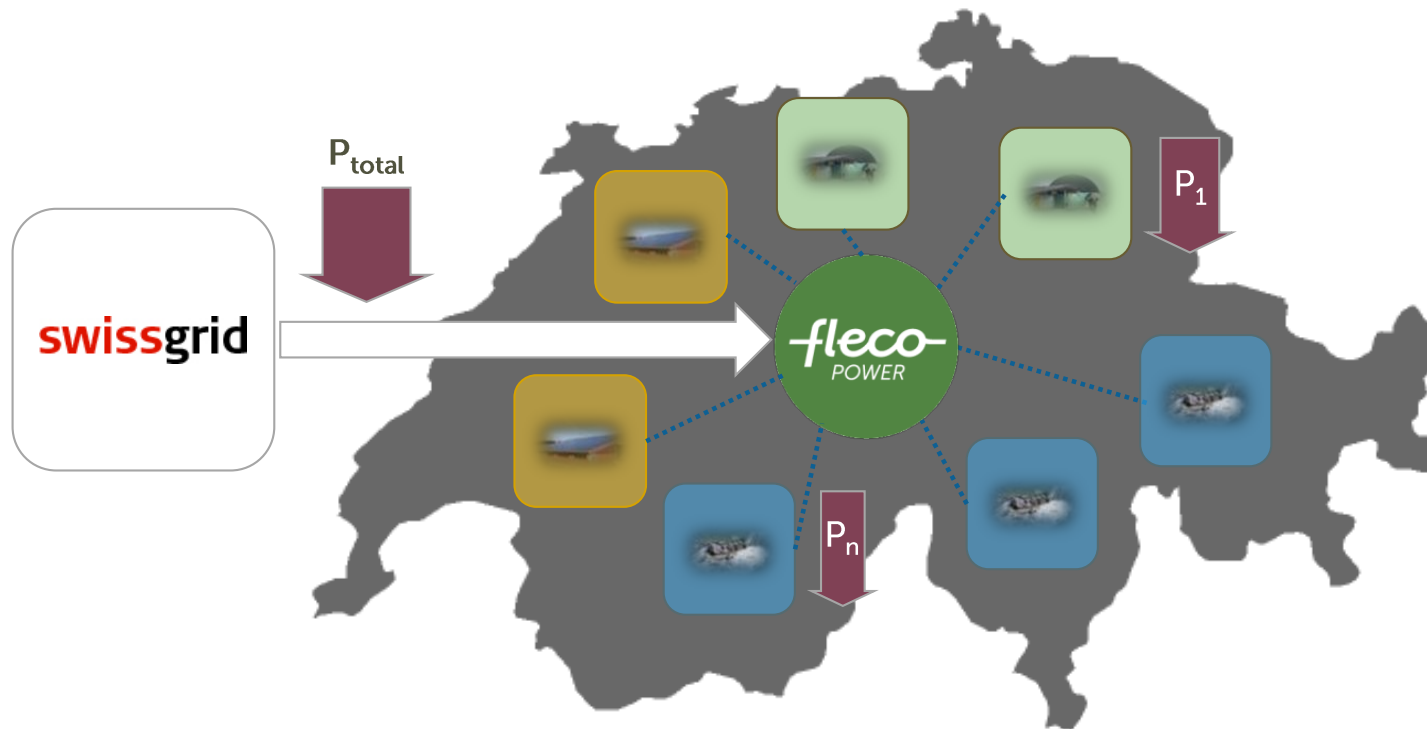


Ancillary services are necessary to keep electricity consumption and production in equilibrium at all times





Through the virtual power plant Fleco Power controls the connected units according to the demands of Swissgrid

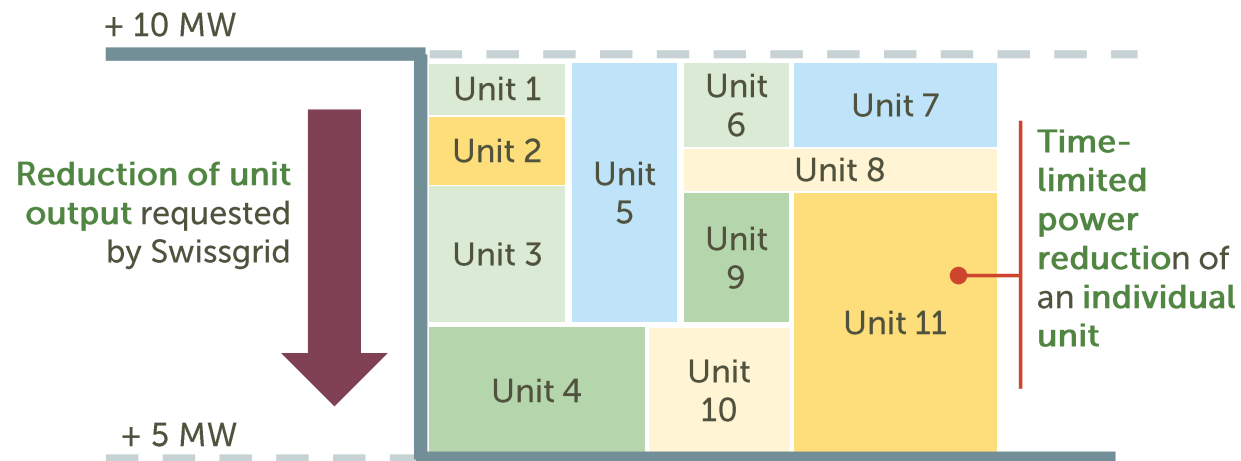


The central control system forwards the control commands to the individual systems.



Our experience shows that decentralized plants can be efficiently marketed by a central stakeholder

Concept



Fleco Power deals with all required tasks such as production forecasts or schedule management



For the producers, Fleco Power offers added value through the simplicity and reliability of its solutions

Value Proposition

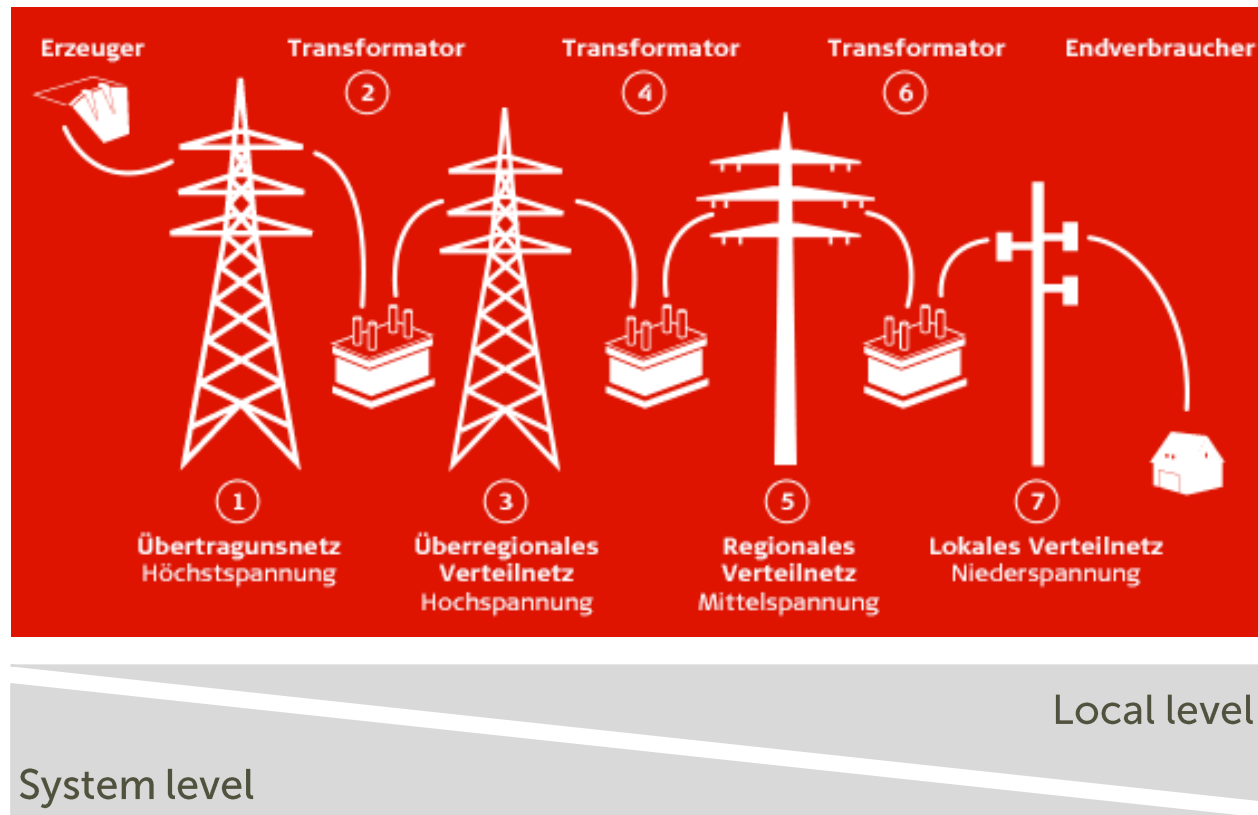
- **Proven solution:** Participation in the ancillary services market with **minimal effort**
- Plants directly **support the stability of the Swiss power grid**
- Step by step **development of new capabilities** without compromising **operative independence**

Additional income with minimal impact on daily operations





By taking into account local conditions, the flexibility can be given an even higher value, for example through the avoidance of network extensions



Fleco Power is currently developing a market-based concept for the cooperative use of flexibility in the distribution grid within a project funded by the Swiss Federal Office of Energy - initial results will be published in June 2017

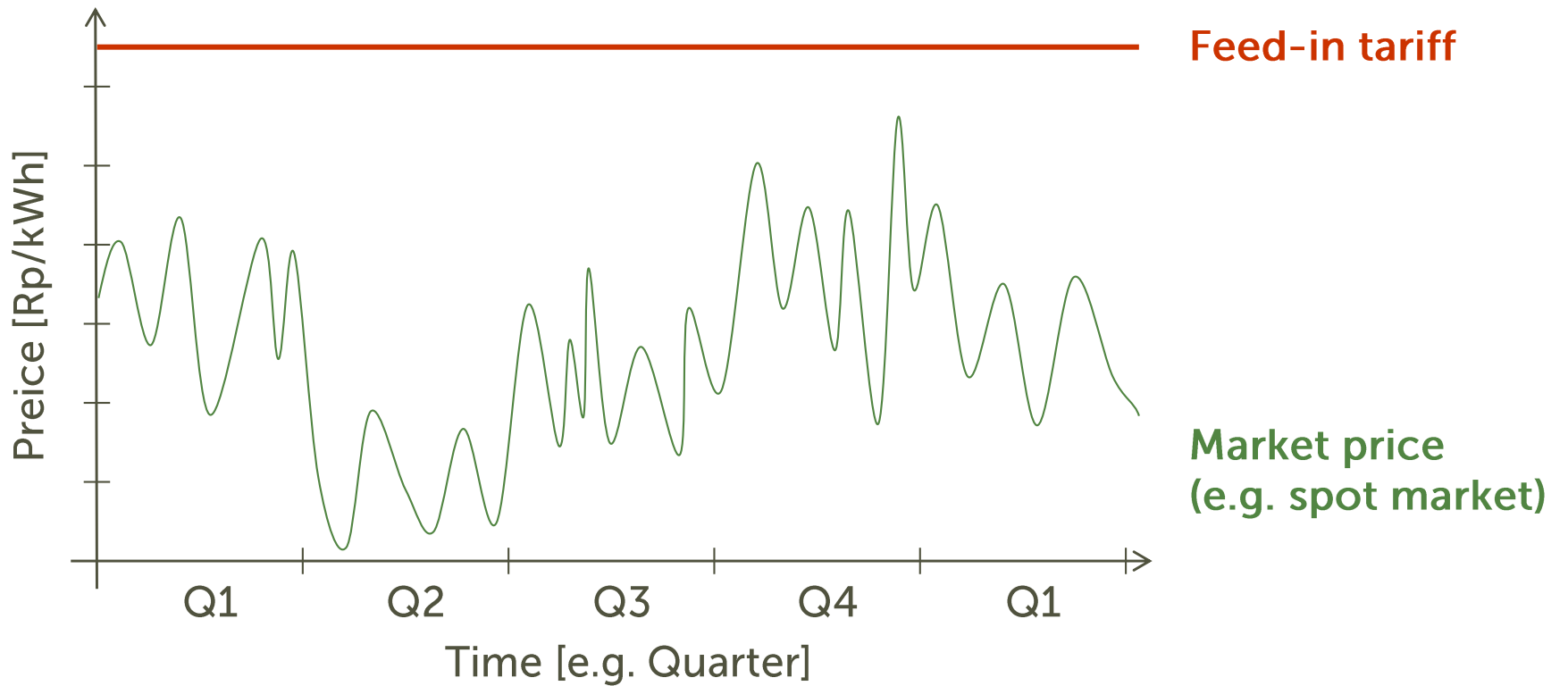


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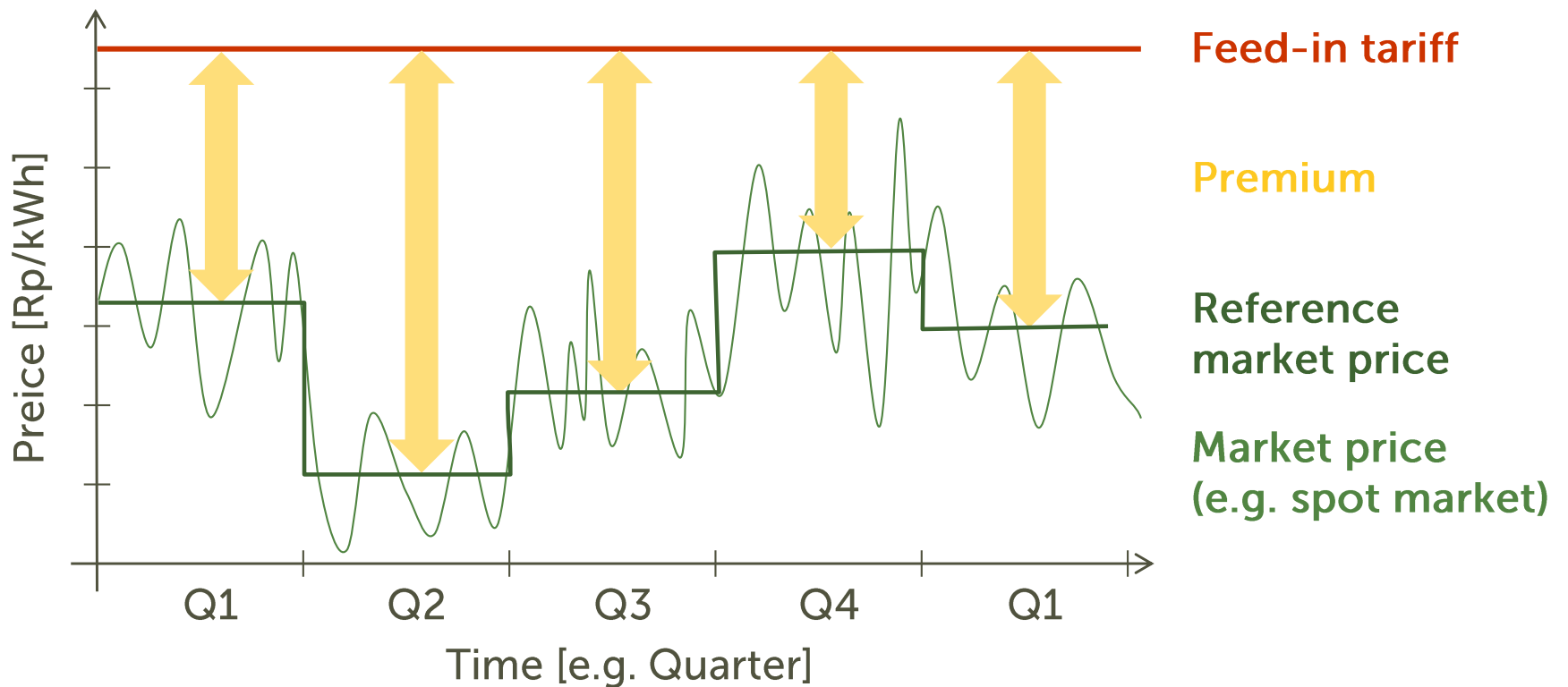


In today's feed-in tariff system, producers receive a fixed price for their electricity independently from the time of production





In the proposed 'direct marketing' system, renewable generation is priced at market value, with an additional premium guaranteeing investment security

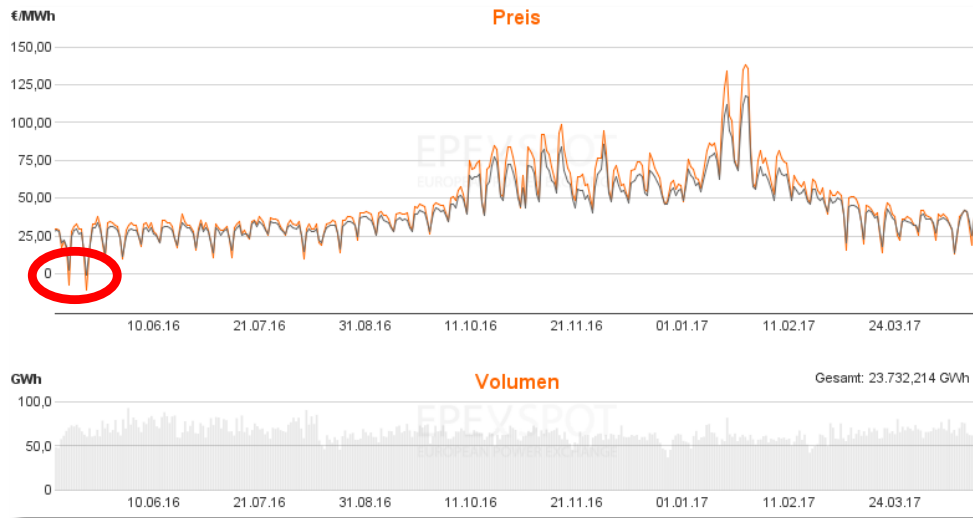


On average, the remuneration will remain unchanged. Forecast quality and market-oriented production are rewarded.

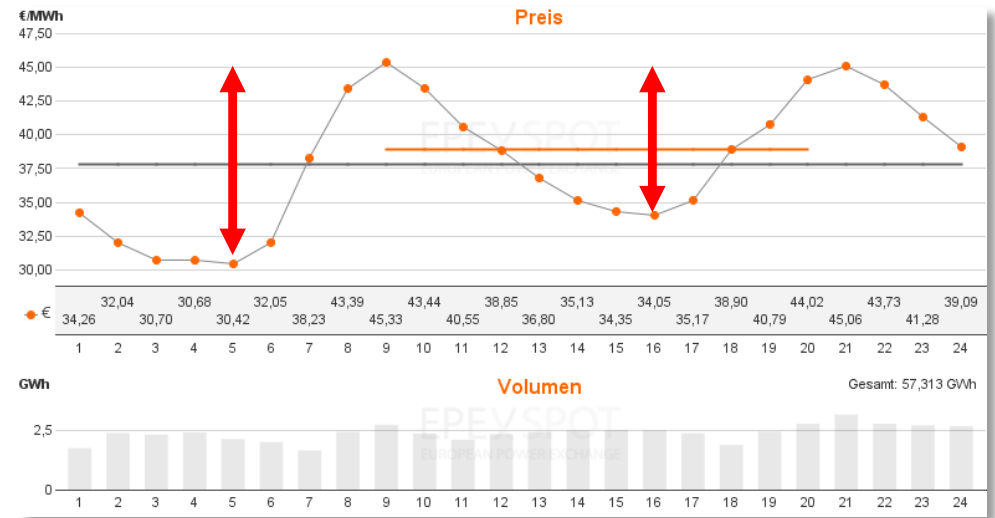


When a renewable production unit offers energy storage, shifting production can be beneficial in the direct marketing system

Curtailment



Shifting





For the producers, direct marketing creates opportunities as well as challenges, Fleco Power offers the necessary support

Challenges

- Required **market knowledge**
- Complexity and cost of **market access**
- Additional **financial risks**



The «Fleco» Solution

- **Bundling the production** through the **virtual power plant**
- **Professional marketing** (incl. forecasts, market access etc.)
- **Hedging of financial returns**

Depending on the **technical characteristics of the unit**, an **active utilization of the flexibility** can generate **additional income**. The **bundling of forecasts and handling** creates an **advantage** for the individual producers **in any case**.



We look forward to your questions and contact



Martin Schröcker
Production & Trading

Fleco Power AG
Technoparkstrasse 2
CH-8406 Winterthur

T: +41 56 444 24 72

E: martin.schroecker@flecopower.ch

www.flecopower.ch

