

# Trading Platform for Renewable Energy Source Products & the use of Artificial Intelligence in RES Forecasting

Regulatory School  
Energy Community  
14. November

Silje Landmark  
Key Account Manager

# Agenda

- Who is Montel and ISN?
- Green Power Hub
- Montel AI forecast models

# Montel

## An information provider for the European Energy Market

## News, data and analysis

### MONTELIGENCE

Discover the Montel group's wide range of advanced analysis and risk management tools.



Featured



### EU gas market can't absorb surplus LNG – analysts

Gas LNG 21 HOURS AGO

(Montel) European gas prices are set to remain “weak” this winter with the market unable to absorb the ongoing s...

[Read more](#)

News wire snapshot

- 15 HOURS AGO  
“Oversold” CO2 corrects up from 6-month low
- 18 HOURS AGO  
German Cal 20 power hits 6-month low on weak CO2, gas
- 18 HOURS AGO  
Portugal's green policy to continue after Costa re-election
- 19 HOURS AGO  
Spanish spot power to rise on lack of wind, nuclear
- 21 HOURS AGO  
Nordic power curve slides on bearish weather, weak CO2
- 22 HOURS AGO  
Oil prices edge up, but concerns remain over global economy
- 22 HOURS AGO  
Wind, solar threaten USD 7bn of Japan coal assets – report

### Oil gains continue amid upcoming US-China trade talks

### Prompt gas dives 13%, November hits 3-year low

The screenshot shows the Montel website interface. At the top, there's a navigation bar with 'MONTEL', 'EN Edition', and various menu items like 'News', 'Analysis', 'Market data', 'Events', 'New user?', and 'Sign in'. Below this is a 'MONTELIGENCE' banner. The main content area is divided into several sections: 'Featured' with an image of an LNG ship and a headline about the EU gas market; 'News wire snapshot' with a list of recent news items; and two main news articles: 'Oil gains continue amid upcoming US-China trade talks' and 'Prompt gas dives 13%, November hits 3-year low'. The bottom of the page shows a detailed news feed with headlines, timestamps, and categories. On the right side, there are several advertisements, including one for StormGeo and another for WATTSSIGHT.

# Montel

**Montel:** Founded in 1989.

**Location:** Oslo (HQ), Stockholm, London, Berlin, Frankfurt, Munich, Paris, Madrid, Szczecin, Ljubljana and Istanbul

**Turnover:** Approx. EUR 10 million in 2018. Steady growth and more than 80% of turnover come from internet based solutions.

**Products:** Montel EQ, API-solutions, Newsletters, Trading Advisory Service, Courses and Conferences, Advertisements and IT-consultancy projects.

**Customers:** Approx. 4,000 users from more than 800 companies around in Europe.

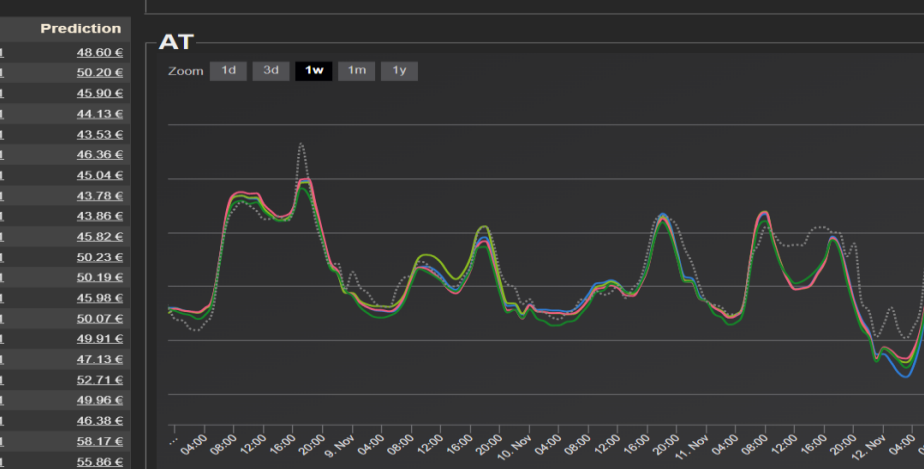
**Companies in the group:** Montel GmbH, Montel News Iberia SL, Montel Tradenode AB, Software Scenario, Energy Quantified (EQ), Price IT, MontelEnergetika, MontelForeks, Datafabricator



# Montel AI

- Started late 2016
- Machine Learning





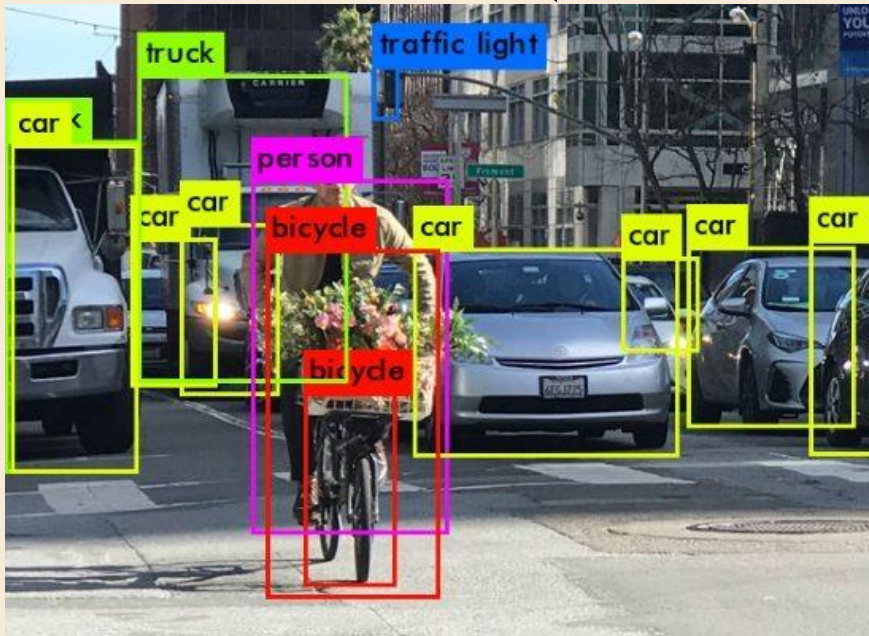
# Montel AI products

- Spot price prognosis
- Run of the river prognosis
  - In-flow prognosis
- Wind Power prognosis



# What is AI?

Where AI is today



What "people" think AI is

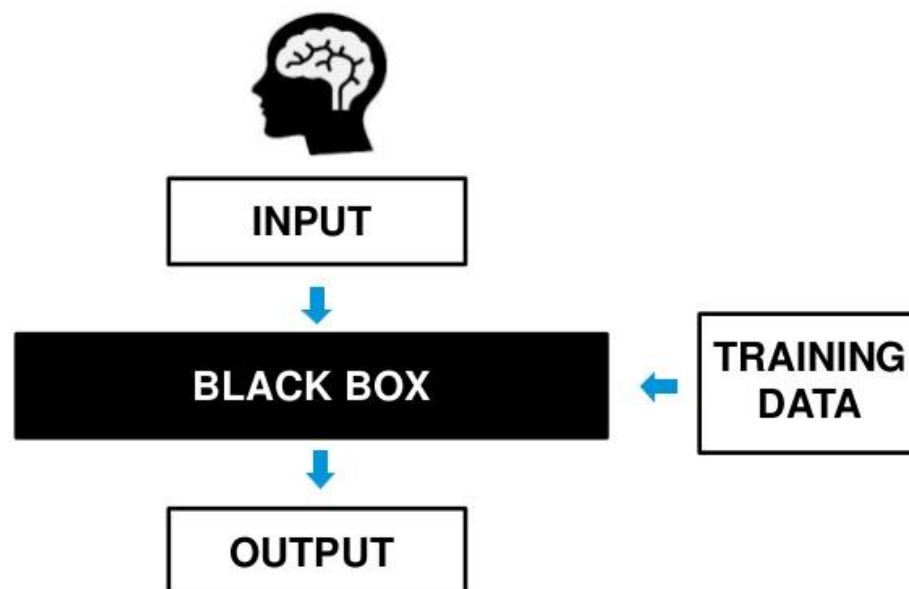


# The basic idea

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14.11.2019

## MACHINE LEARNING





# Why AI?

- Great when model output errors is acceptable
- Great when errors in model input

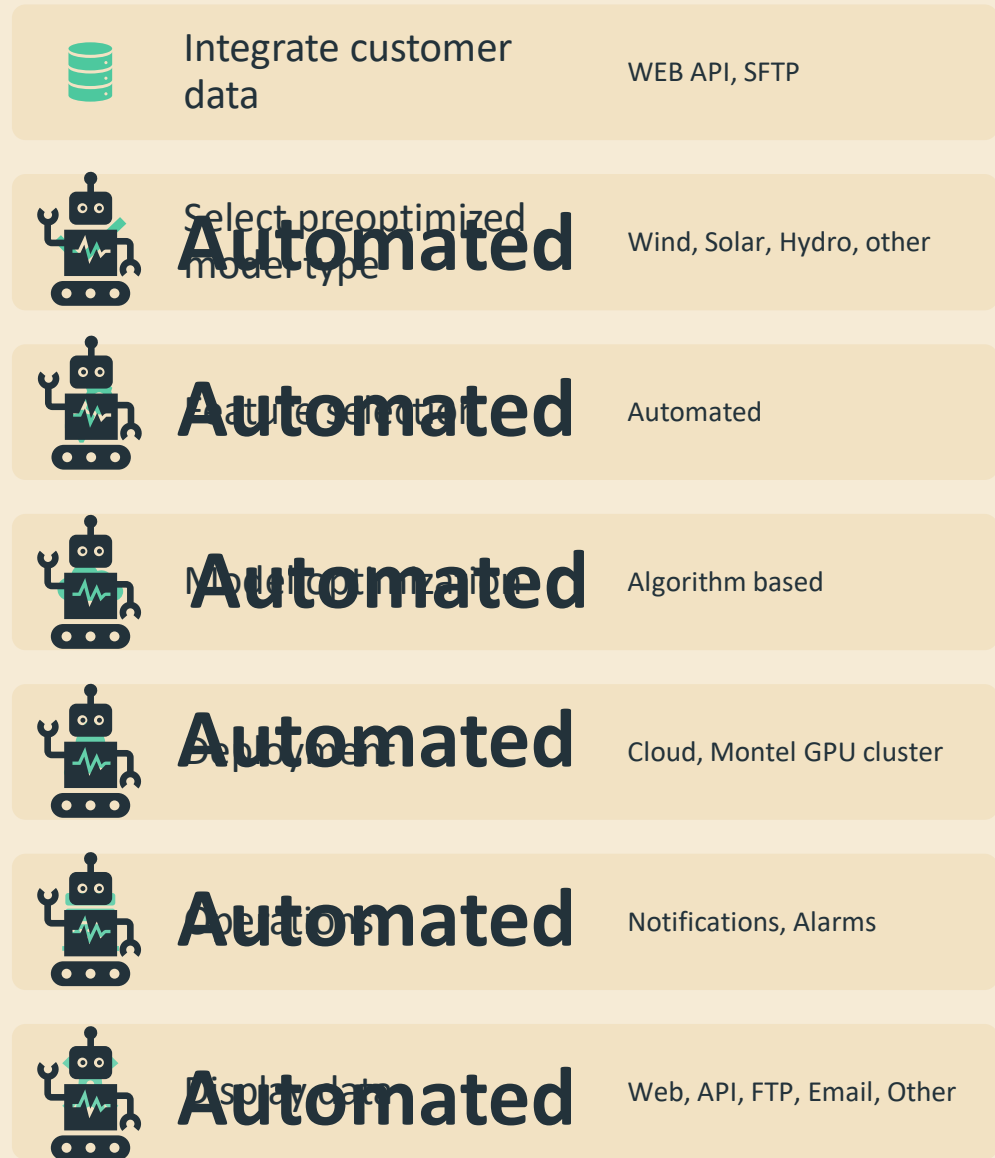
Weather Forecast Output Errors OK!



# Our Model

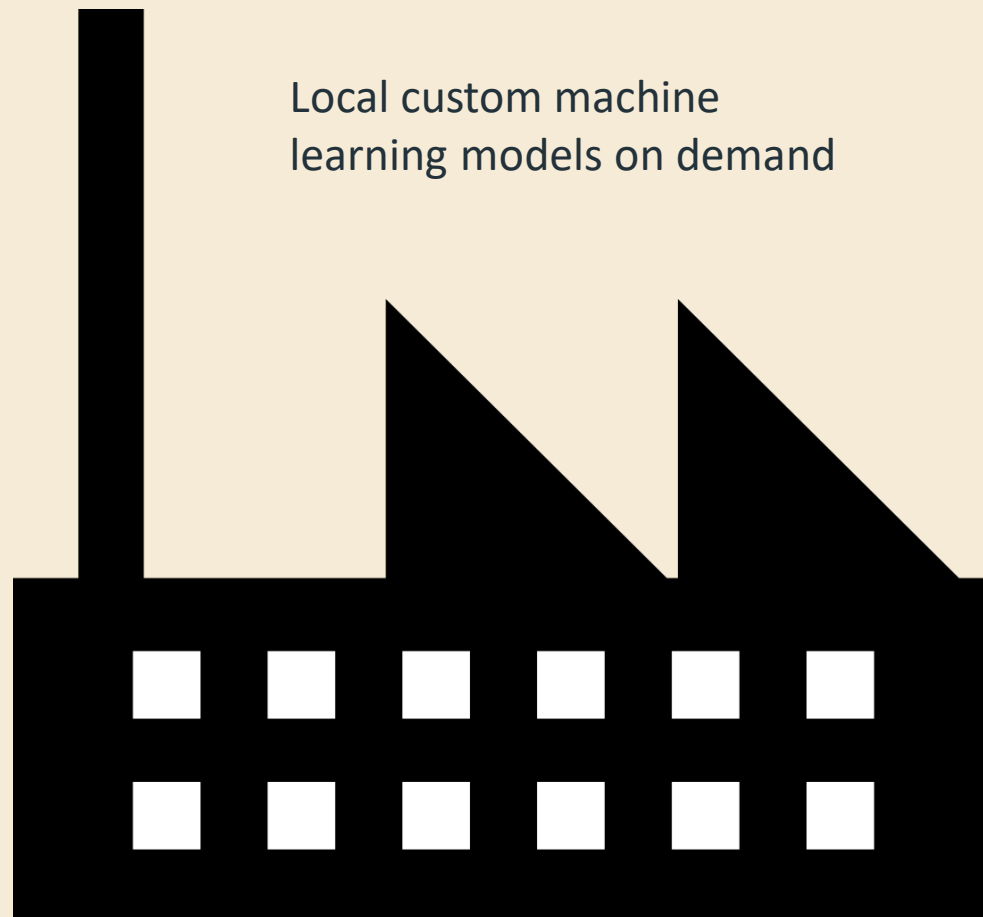
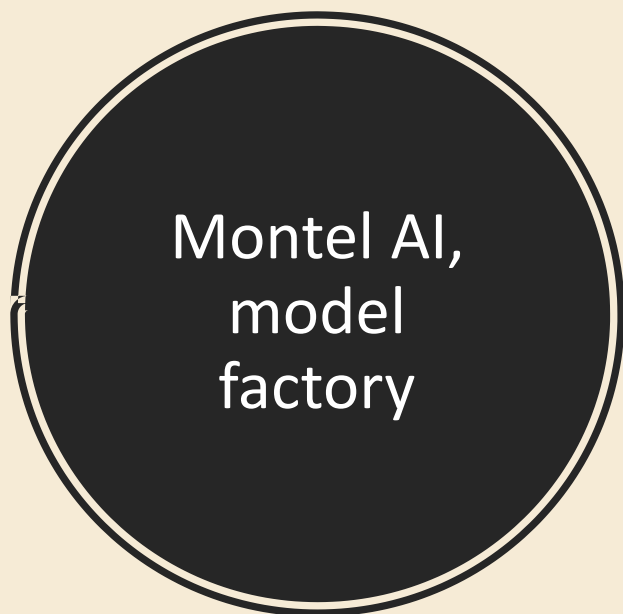
- Adapts to new trends
- Improves with data
- Improves with more compute power
- Improves alongside advancements in the field of machine learning


# Model pipeline



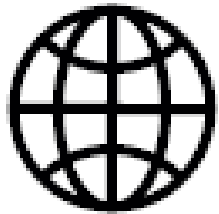
# The results

- Automation
- More accurate registration in the day-ahead market
- Less correction to be made in the balancing market



 Adjusting satellites, please wait...

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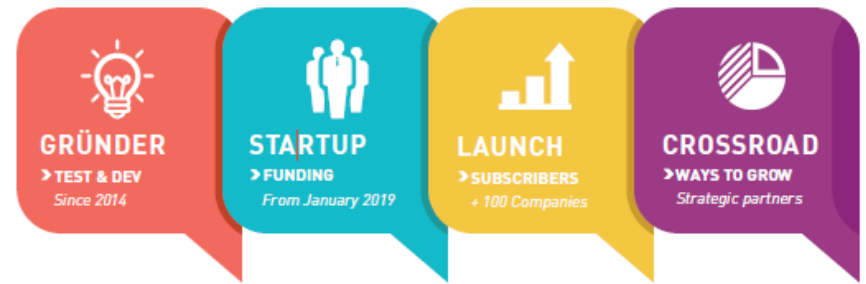
# GREEN POWER HUB

by Montel

Joint venture project between ISN AS, Montel AS and ISN Solutions AS.

Founder of Green Power Hub (GPH):  
ISN – Interest Sharing Network

Launched 22. August



COMPANIES

COUNTRIES

101

19

GO TRADED

ELCERT TRADED

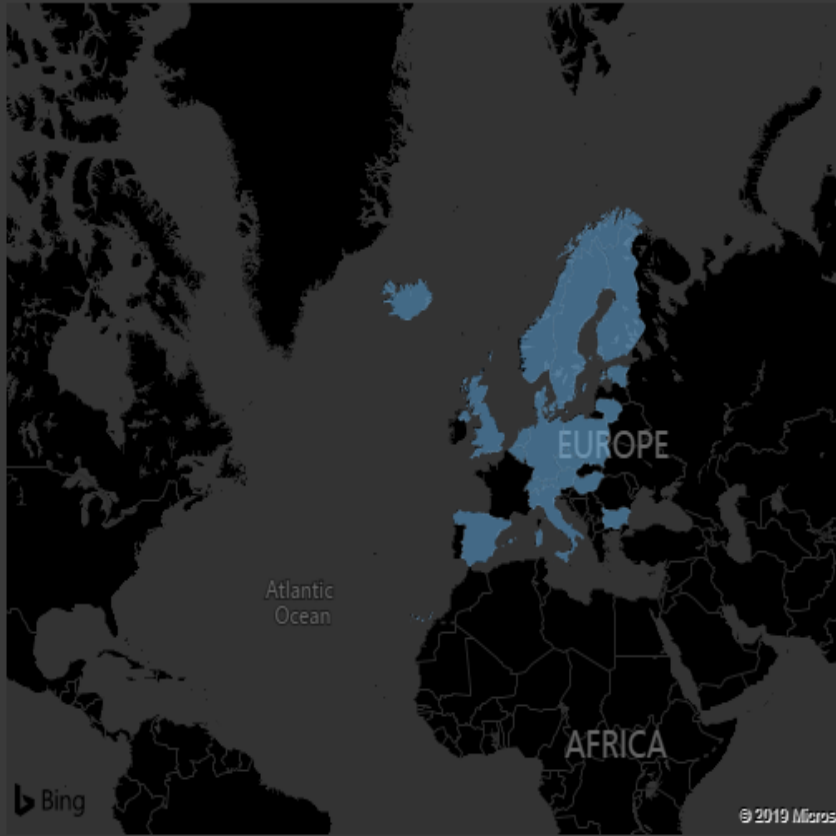
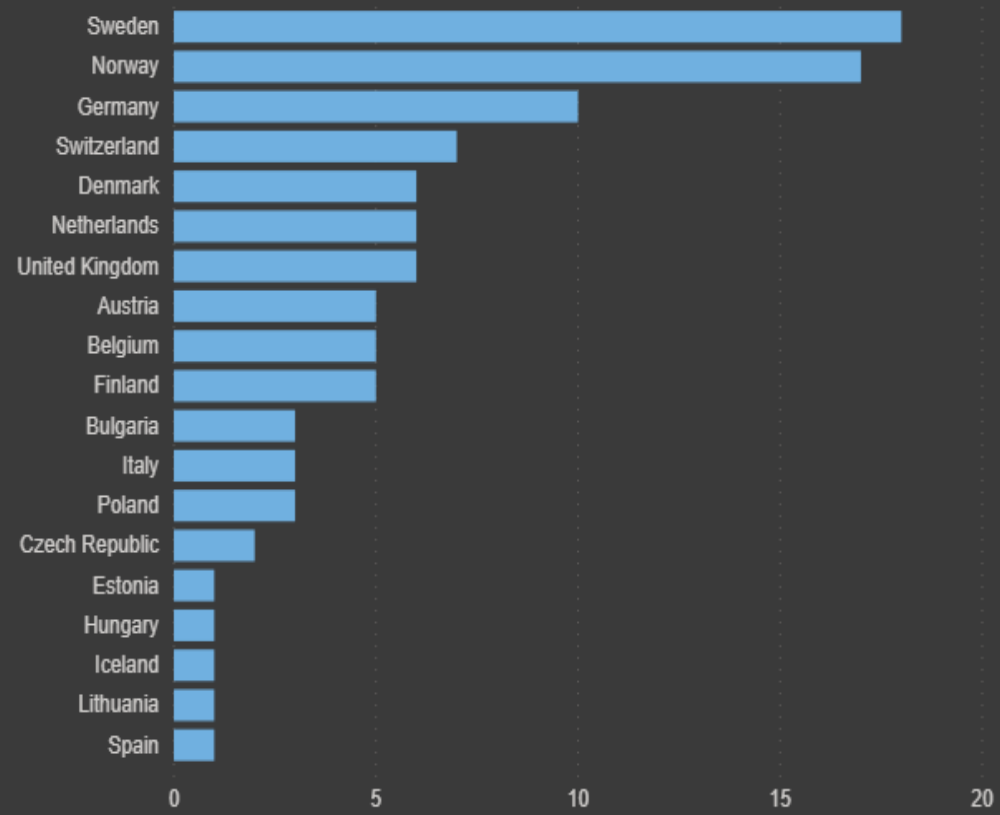
267 GWh

59 GWh

HOME

ELCERT

### COMPANIES PR COUNTRY





# Guarantees of Origin (GOs)

*EU Renewable Energy Directive (2009/28/EC):* Guarantees of Origin prove to the final customer that a given quantity of energy was produced from renewable energy sources

*Renewable Energy Directive (REDII):*  
From 2020 electricity suppliers and consumers shall use Guarantees of Origin to document and report renewable electricity claims in Europe

Common European certificate system

Market-based instruments to increase awareness and use of renewable energy sources.

A heterogenous product



**GREEN POWER HUB**

by Montel



**Meet. Deal. Done.**

# Green deals made easy



*Our vision is to develop a world-wide trading **network** for renewable energy gathering all market players in one place.*



**GREEN POWER HUB**

by Montel

Meet. Deal. Done.

# Challenges in trading Guarantees of Origin

- Low price transparency
- Limited reference prices and volumes in the market
- Finding trading partners



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Meet. Deal. Done.

# Green deals made easy.

The Green Power Hub is a complete bilateral on-screen trading network for GOs and Elcerts. We offer full transparency on bid-offer spreads and deals done.

Secure subscription-based trading, no per-transaction costs and portfolio tools save you both time and money.

**We welcome you to try our service for free.**

[Sign up](#)



## Meet.

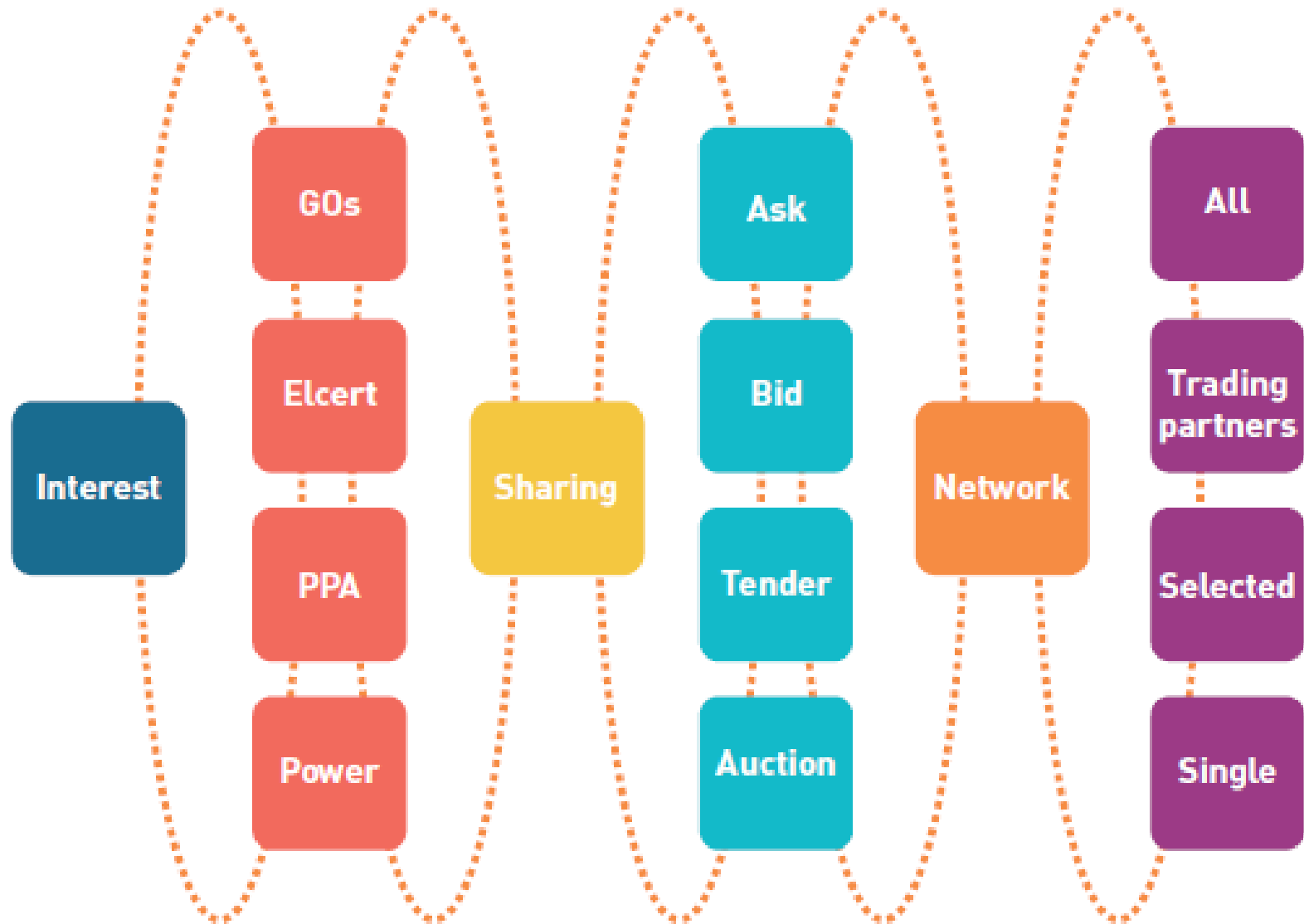
Green Power Hub enables you to freely invite and accept invitations from counterparties to trade GOs and Elcerts of any size, origin, technology or volume.

## Deal.

Once registered, you can start placing your buying or selling interests on a fully transparent trading platform – and negotiate deals with your counterparties.

## Done.

When buyer and seller agree on a deal, Green Power Hub automatically issues a contract proposal which counterparties may use for settlement.



# The way forward

## Expand in markets

- Power
- PPAs

## Expand in services

- **Portfolio & Deal Management**
  - Include trades from outside
  - Portfolio Management
- **Enable more ways of trading**
  - Auctioning
  - Tendering
  - Clearing



# Summary

- Two ways of supporting renewable energy
- Different approaches
- Both solving market challenges
- Similar way of working  
We ask the customers, **What can we do for you?**

# What can we do for you?

## Thank you for your attention!

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