



# Vertical Axis Tracking

## On Floating Solar systems

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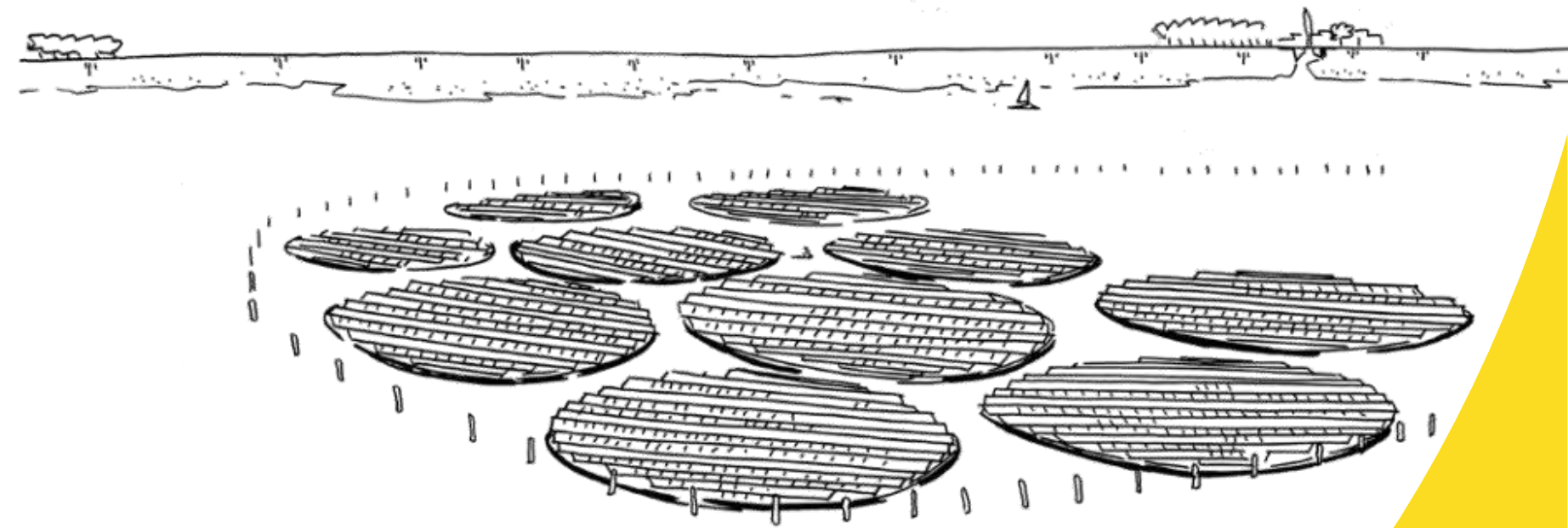


# Onshore FPV: Vertical Axis Tracking Systems

An innovative approach for optimizing renewable energy production on inland water bodies with waves up to 1 meter.

## Today's presentation:

- About Floating Solar
- How does Vertical Axis Tracking work?
- Why Vertical Axis Tracking?
- Where is Vertical Axis Tracking operational?
- Conclusion



# About Floating Solar

## Vision

- Accelerating the energy transition using all suitable space available
- Multifunctional use of water surfaces

## Mission

- Contributing to the energy transition by providing robust Floating PV systems
- Leveraging Dutch engineering know-how in water installations



# About Floating Solar

## Company info

- Started in 2017
- Independent and privately owned
- Over 10 MWp installed with a pipeline through 2025 of >100MWp
- International expansion
- East-West



South

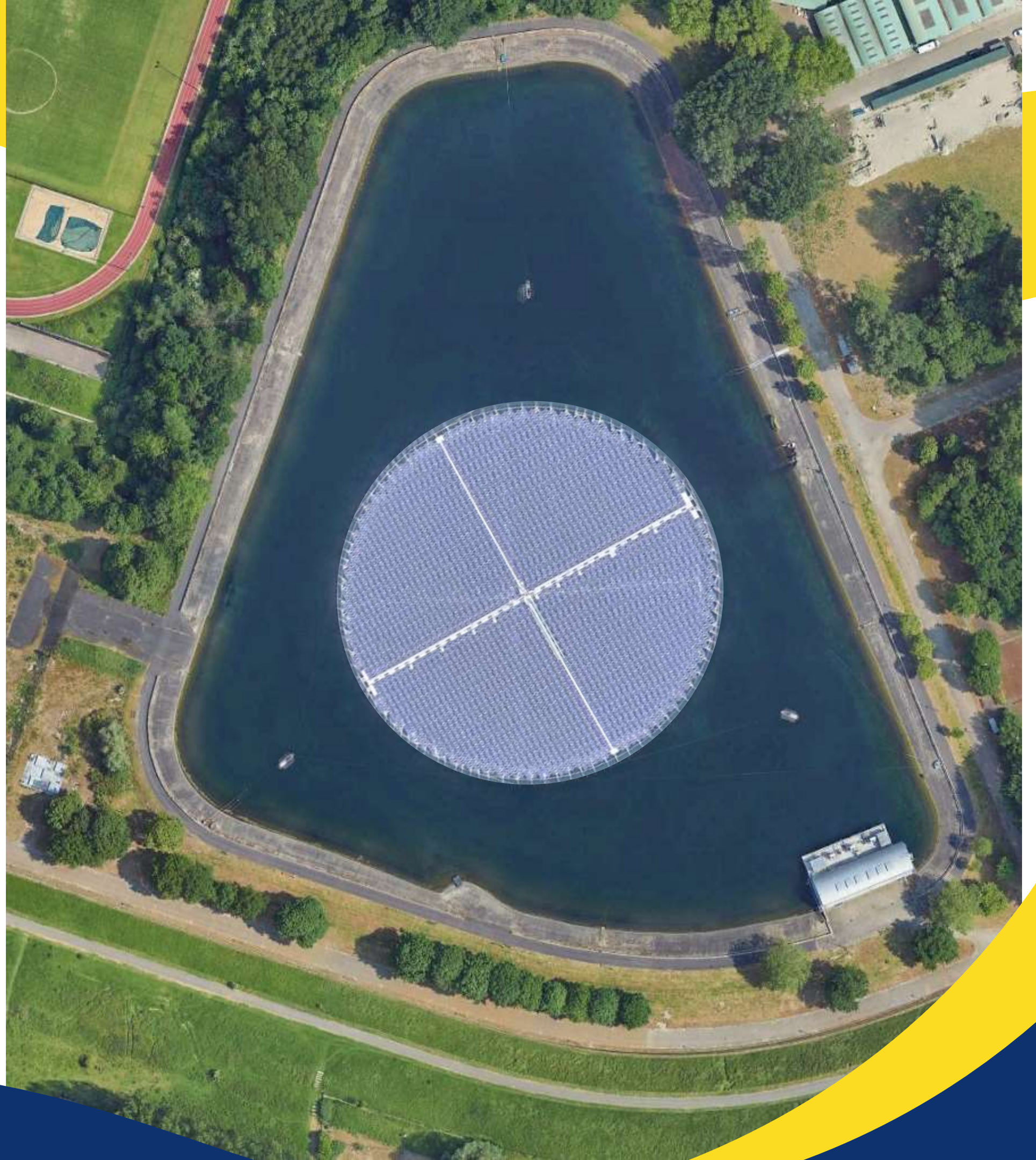


Tracking Systems



**How does Vertical Axis Tracking work?**

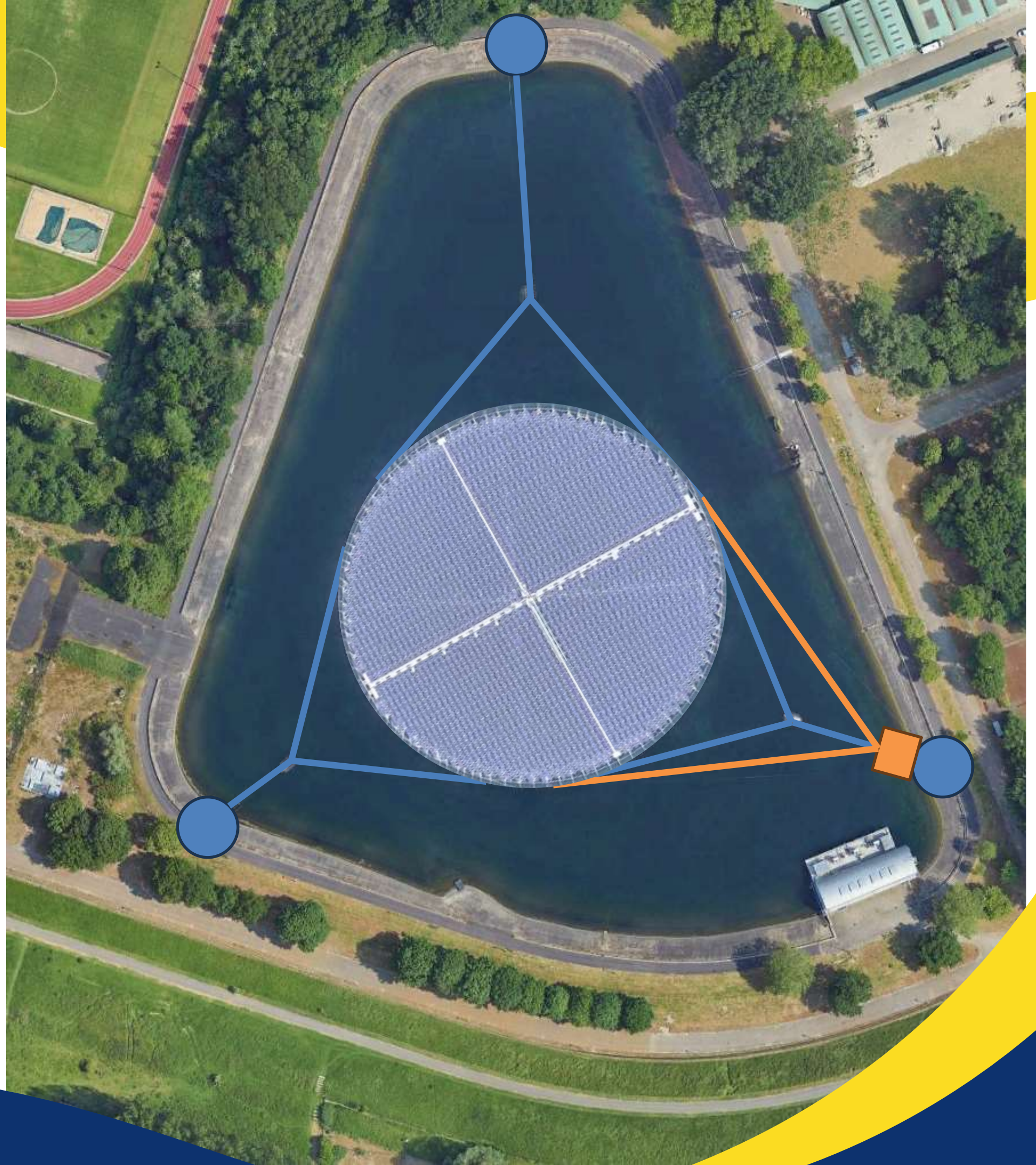
**Rotating with the sun**



# How does Vertical Axis Tracking work?

## Rotating with the sun

- Anchor piles
- Anchor lines
- Winch
- Winch lines

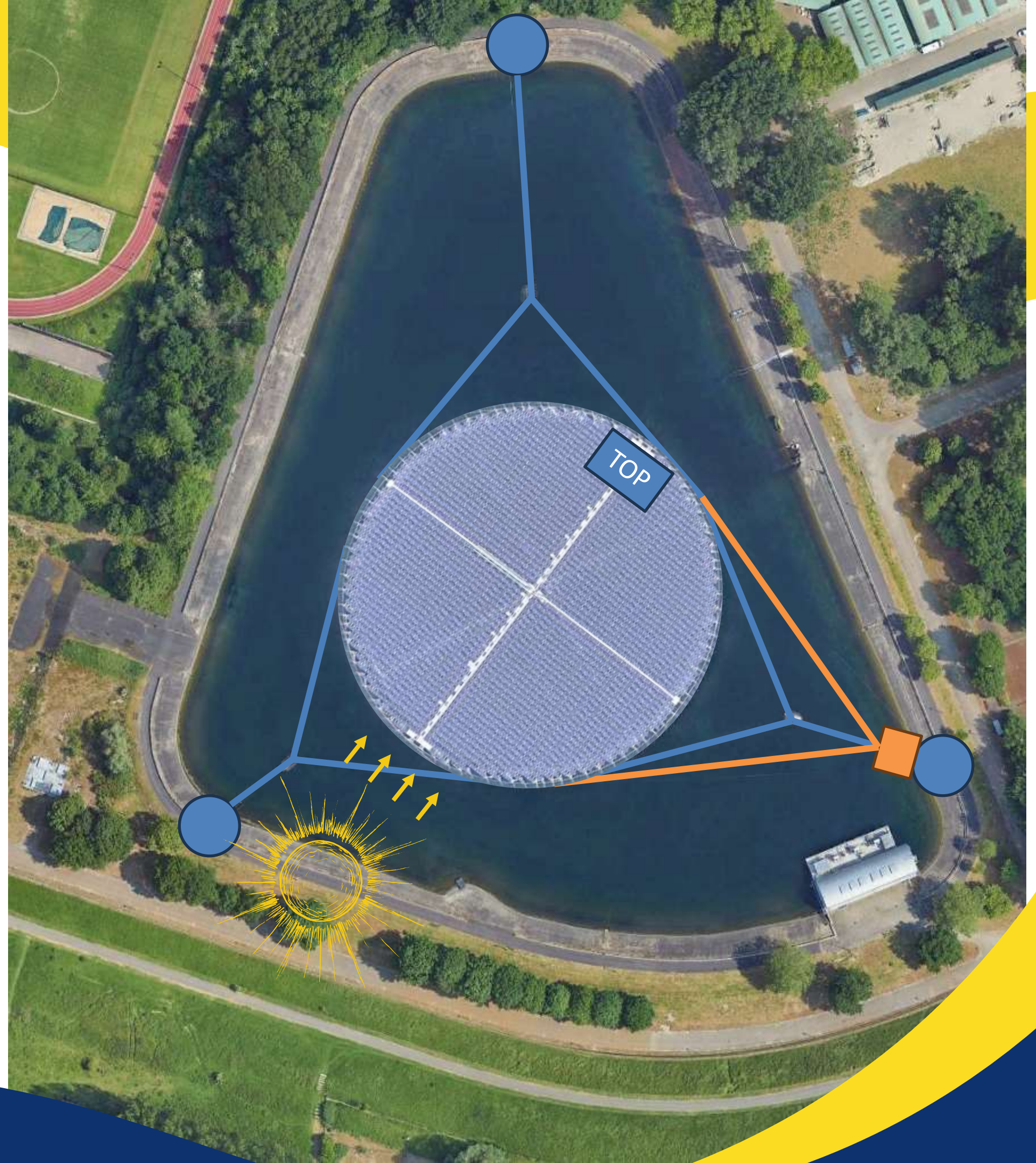


# How does Vertical Axis Tracking work?

## Tracking the sun

During high sun positions

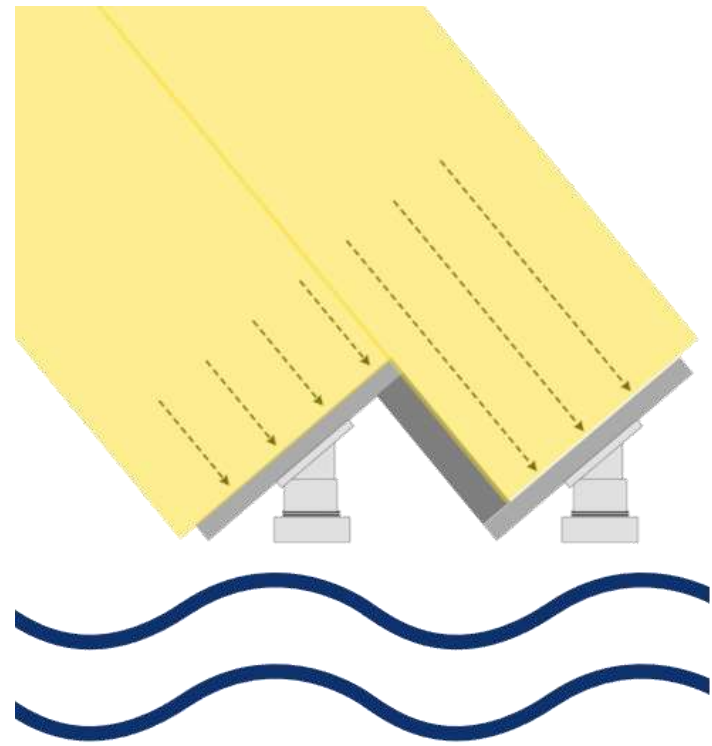
- Anchor piles
- Anchor lines
- Winch
- Winch lines



# How does Vertical Axis Tracking work?

## Backtracking

During low sun positions



- Anchor piles
- Anchor lines
- Winch
- Winch lines

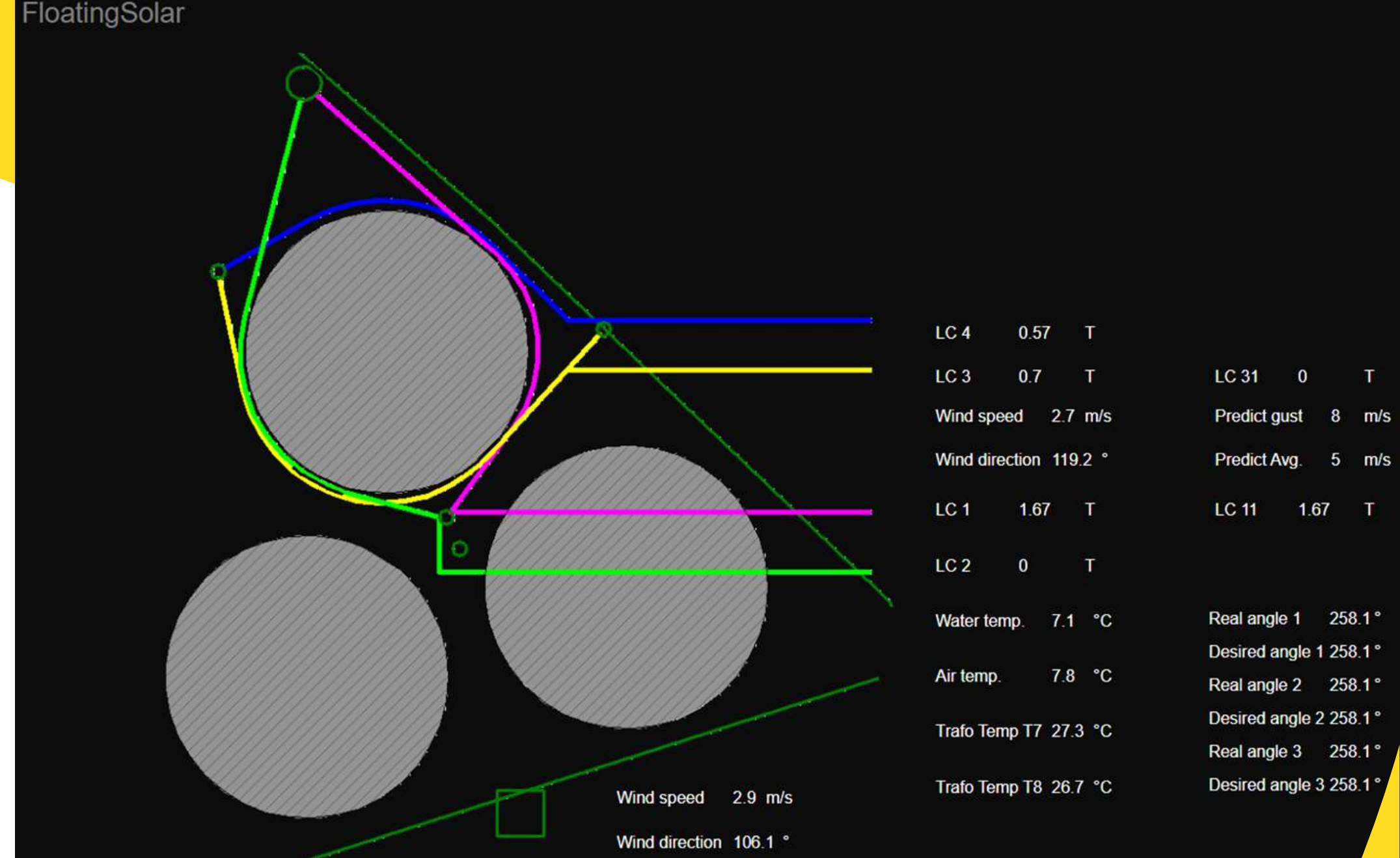




# How does Vertical Axis Tracking work?

## Software

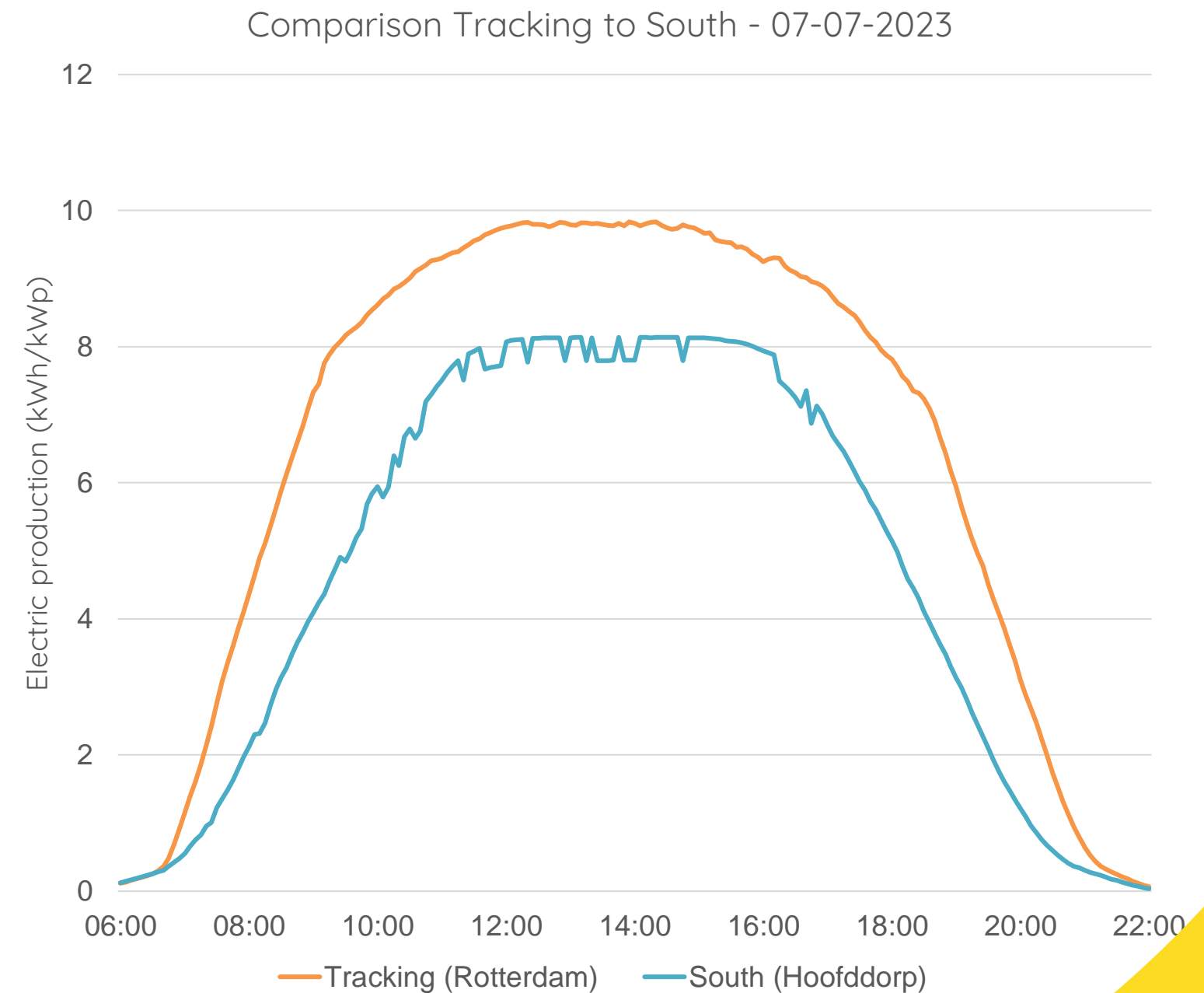
- In-house development
- Weather Risk Management



# Why Vertical Axis Tracking?

## Optimal yield

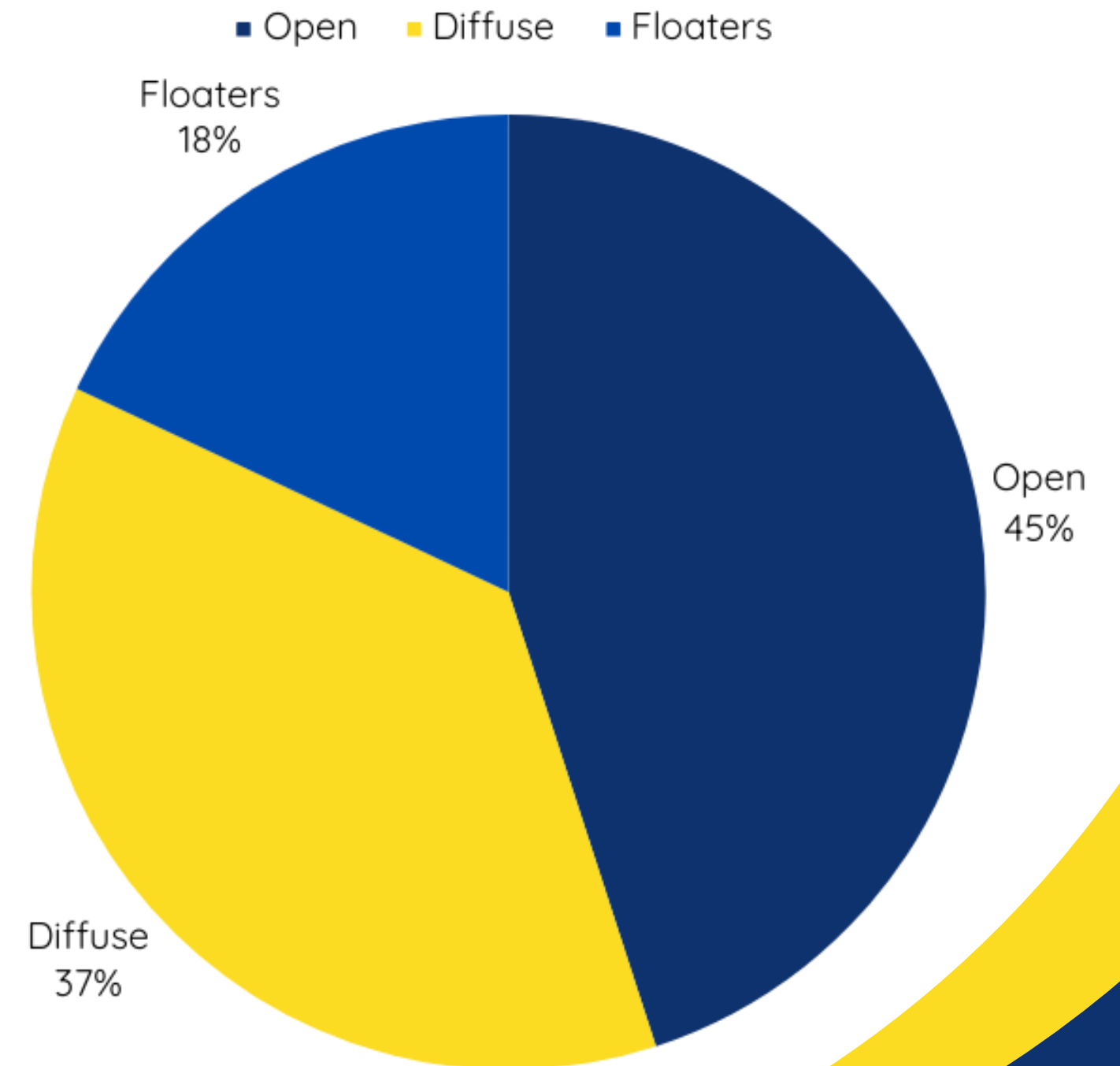
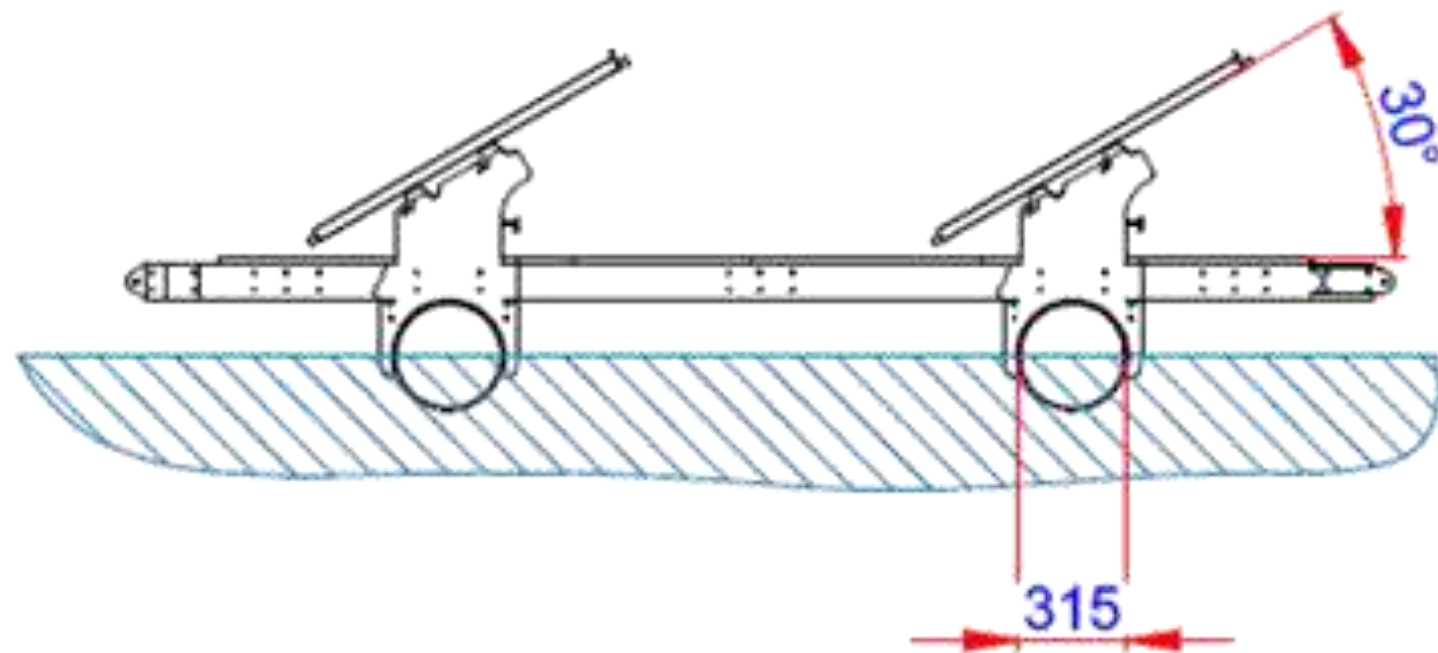
- Higher yield (or less panels needed)
- 25% more for Tracking (Evides Rotterdam) compared to South (Hoofddorp) in 2022
- Flatter production curve
- A great self-consumption business case: applied to power drinking water pumps



# Why Vertical Axis Tracking?

## Excellent system design

- Robust design
- Open system to minimize impact
- Applied on drinking water and mining areas



# Why Vertical Axis Tracking?

## Low maintenance

- Less complex than you think:
  - Only 1 rotating element
- Over 5 years of experience
- Minimal soiling
  - 30° angled
  - Bird protection profile



# Where is Vertical Axis Tracking operational?

## References

- Pilot Slufter (Zon op Water)
- Rotterdam – 1 MWp
- Andijk – 4.5 MWp
- Northern Germany



# Conclusion

## Why Vertical Axis Tracking?


- 20-25% higher yield compared to south-facing systems
- Robust system design
- Low maintenance due to less soiling





# Floating Solar

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