

# Capital Markets Day 2022

01 September 2022



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# Agenda

1 Corporate/ESG 12:00-12:30

2 Volue – market update 12:30-13:00

3 Development 13:00-13:30

4 Break 13:30-13:45

5 Production 13:45-14:15

6 Operations 14:15-14:45

7 Closing remarks 14:45-14:50



# Cloudberry develops, owns and operates Nordic renewables



Local developer, owner and operator of hydro- and wind power in the Nordics – the responsible way



Large and growing development backlog and pipeline both on- and off-shore



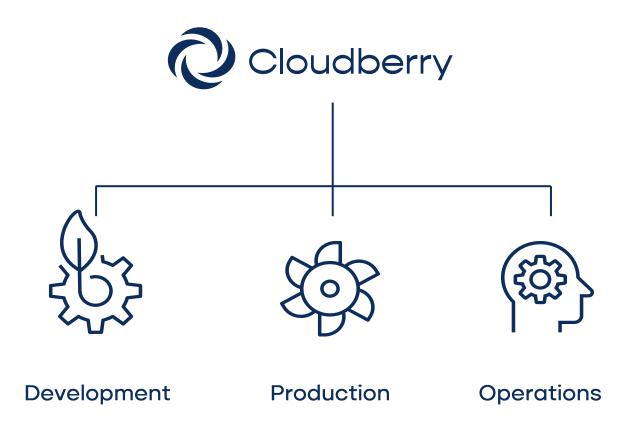
Diversified and growing production portfolio. Complementary hydro and wind assets close to the European power connectors.



Highly efficient operating platform



Listed on Oslo Stock Exchange's main list





# The Cloudberry family



Anders J. Lenborg Chief Executive Officer



Christian A. Helland Chief Value Officer



Jon Gunnar Solli Chief Operating Officer



Charlotte Bergavist Chief Development Officer



Ingrid Bjørdal Chief Compliance Officer



Suna F. Alkan Chief Sustainability Officer



Andreas Thon Aasheim Chief Commercial Officer



Christian During COO Offshore Wind



Marie N. Gulsvik Group Accounting Manager Project Manager



Roger Grøndahl



Ole-Kristofer Braanes Senior Financial Officer



Sebastian Prause Project Manager



Ingemar Andersson Wind Analyst



Stefan Larsson **Environmental Lawyer** 



Elisabet Wahlstedt Project Manager



**Daniel Kulin** Senior Project Manager



Malin Wahlman Communication Manager



Oscar Engelbrekt GIS-specialist



Ella Nordström **Project Coordinator** 



Tanja Tränkle Senior Project Manager



Stig J. Østebrøt CEO Captiva



**Olav Ellestad** CFO Captiva



Thomas Bjørnerud CCO Captiva



Stig-Martin Braate COO Captiva



Marius Øgård CTO Captiva





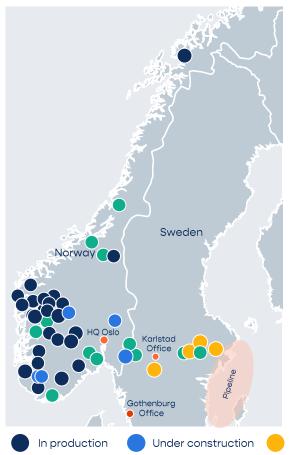






### **Business overview**

(net figures)



#### **Production**

# Production incl. under construction<sup>1</sup>

- Hydro assets: 28
- Wind assets: 3
- Capacity: 156 MW
- Production: 522 GWh

(normalized)

#### Develop

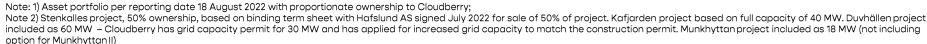
#### Construction permit<sup>2</sup>

- Wind assets: 4
- Capacity: 168 MW<sup>2</sup>
- Production: 459 GWh (normalized)

#### Backlog

- Projects: 15
- · Capacity: 420 MW
- Pipeline of additional >20 projects and >2 500 MW







# Cloudberry's value creation through the value chain

#### Early-stage development

- Convert acreage into projects
  - Hydro, wind and shallow water in the Nordics
- Cloudberry's developers have local knowledge and are hands-on when dealing with local stakeholders
- Interaction with landowners, industrial power consumers, grid owners and local authorities
- >2 500 MW pipeline

Backlog: 420 MW

Capital allocation:

Low

#### Commercializing assets

- Progress in-house developments to construction permit and FID
  - Stenkalles (Vänern), Munkhyttan, Duvhällen, Kafjärden
- Acquire attractive projects with growth opportunities or low-cost entries with value potential
- Continuously evaluating farm-outs or sale of assets prior to construction/large capital allocation

Construction permit:

168 MW

Capital allocation:

Medium

#### Optimizing producing assets

- Capital allocation policy targeting highest return projects in construction phase
- Continue to own strategic assets in key locations close to renewable power demand
- Hold assets with unrealized potential until value is unlocked
- Strategy to over time re-cycle capital to optimize return on capital employed (ROCE)

Production incl. under construction:

156 MW

Capital allocation:
High

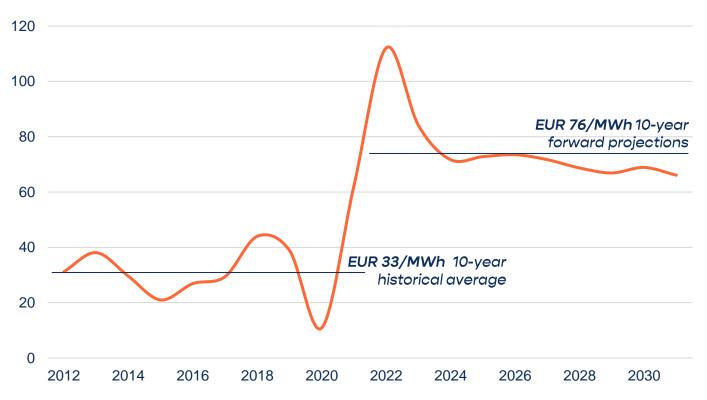


# Favorable outlook for Nordic power prices

Strong power price outlook driven by energy demand and ambitious climate goals

#### Positive outlook for power prices

EUR/MWh - Volue Norwegian system price estimates (not inflation adj.)



#### Key market drivers



Strong governmental support and agreement for climate neutrality with EU Fitfor55 and REPowerEU



Statnett expecting 40% increase in Nordic power consumption by 2040, largely due to electrification of power intensive industries, as well as new industries (hydrogen, battery, data centers)



The relevant Nordic authorities recognizes the need for more power and are facilitating an increase in installation pace



Positive development in the long-term power prices





### Sustainability reporting journey



2020

- Completed first Sustainability Report in accordance with the World Economic Forum (WEF) Stakeholder Capitalism Metrics
- Conducted materiality analysis and stakeholder dialogue

- Started reporting emissions according to Greenhouse Gas (GHG) Protocol
- Reported climate risks and opportunities (TCFD)<sup>1</sup>
- Defined the UN Sustainability goals that are particularly important to Cloudberry

2021

- Complete reporting of scope 1 and 2 emissions, reporting on scope 3 emissions expanded
- Strengthened the assessment of climate risk and opportunities related to the company expansion in line with TCFD
- Set scope 3 net-zero target by 2040

- Taxonomy eligible
- Supplier Code of Conduct implemented in procurement phases
- ESG committee established
- Routines and policies on reporting<sup>2</sup>

2022

- Screening and identification of material categories in scope 3 emissions in the value chain
- Alignment to the technical screening criteria with the EU Taxonomy Regulation
- Preparing for TCFD scenario analysis
- Initiate internal reporting in accordance with Transparency Act, which came into force in July 2022
- Preparing for new regulations<sup>3</sup>

Click here to download the Sustainability Report 2021



<sup>10 &</sup>lt;sup>1</sup>TCFD = Task Force on Climate-Related Financial Disclosures

<sup>&</sup>lt;sup>2</sup> ESG due diligence, Whistleblowing channel

<sup>&</sup>lt;sup>3</sup> Corporate Sustainability Reporting Directive (CSRD), European Sustainability Reporting Standard (ESRS)

## Reporting in full transparency

- Corporate governance
  - Good corporate governance the foundation for value creation and trustworthiness
  - Ensure transparent and consistent reporting on environmental, social and governance topics
- Preparing for new regulations



<sup>&</sup>lt;sup>1</sup> Lov om virksomheters åpenhet og arbeid med grunnleggende menneskerettigheter og anstendige arbeidsforhold



<sup>&</sup>lt;sup>2</sup> Lov om likestilling og forbud mot diskriminering

<sup>&</sup>lt;sup>3</sup>The Norwegian Corporate Governance Board

# Creating value with ESG

#### Our values and our purpose ...



Our **purpose** is to provide renewable energy for future generations and powering the transition to a sustainable future. Our long-term success is linked to operating our business in a sustainable way

... are **reflected** in the way we go about our business ...

- We develop and produce renewable energy
- Act as a trustworthy company
- Take climate action
- Avoid emissions wherever we can
- Alignment to the EU Taxonomy
- Apply good corporate governance
- Invest in local stakeholder relations

... securing competitive advantage and **leading to tangible results** that we convert to value for our shareholders

Access to projects of high quality

Efficient operations

Access to attractive funding

Attractive M&A partner

Access to talent

Local value creation



## Becoming the leading Nordic Independent Power Producer (IPP)

#### Key focus points for Cloudberry:

- Be a **local partner**, which is present for landowners, developers and local contractors and suppliers
- **Continued growth** of our production portfolio with the complimentary renewable assets hydro and wind
- Flexibility from early phase projects to power plants in operations; Cloudberry can be an optimal partner and owner
- 4 Sustainability an integrated part in everything we do
- Strong financial position Long-term owners with renewable energy focus. Utilize Cloudberry's financial position to grow through settlement in shares, cash or a combination
- Strong **technology focus**, to create an efficient and scalable operating platform







# Accelerating Development

Capital Markets Day | 1 September 2022

Charlotte Bergqvist, Chief Development Officer



### Outlook Sweden - acceleration of demand

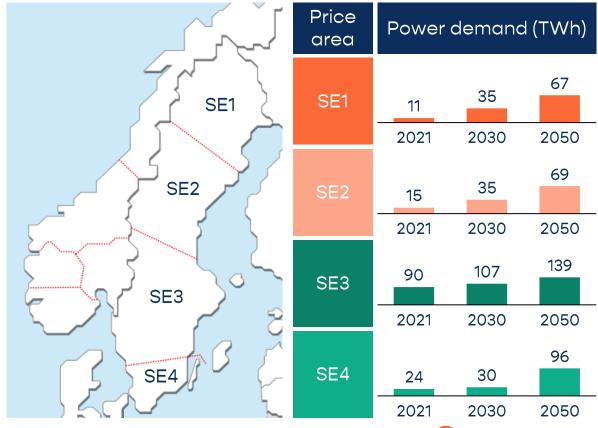
- Electrification of industry, new green industries and transports drive the need for new added renewable capacity
- Electricity consumption expected to triple until 2050<sup>1</sup>

o 2030: 200 TWh

o 2050: 370 TWh

 Mid-term towards 2030 - mainly wind/solar to be added to the mix

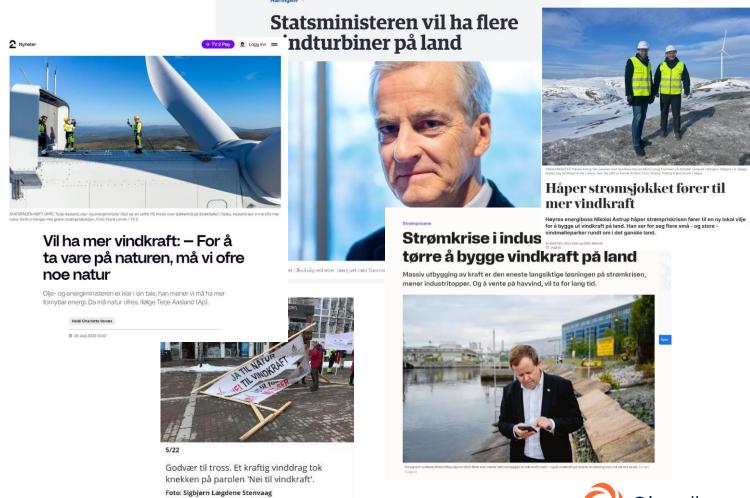
#### Swedish power demand estimates





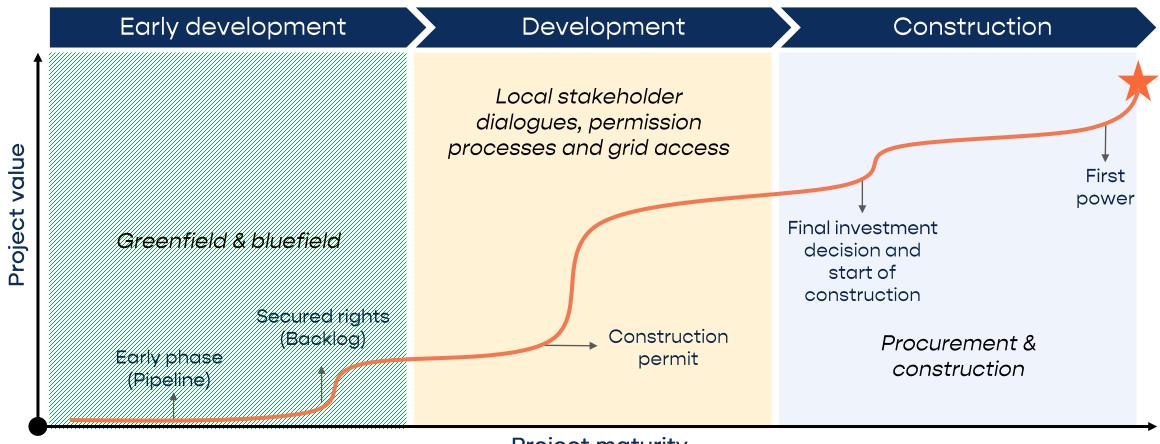
# Outlook Norway – restarting wind energy developments

- Norway finally to resume its licensing process for onshore wind power developments after a three-year stop
- Cloudberry well-positioned for restarting its development in close collaboration with local stakeholders
- Impact assessment program for permitting requires municipal approval
- Aim to run several such assessments in 2023





# Development - the process



# Development - the portfolio

#### Early development

#### Development

#### Construction

# shallow water Offshore/

#### Pipeline

5-10 Projects:

Geography: Sweden

#### Stenkalles1)

Capacity: net 50 MW

Production: net ~ 164 GWh

Hafslund to own 50%

# **Onshore**

#### Backlog

15 Projects:

> Capacity: 420 MW

Geography: Sweden and Norway

#### Björnetjärnsberget

Capacity: ~ 90 MW

Production: ~ 290 GWh

#### Duvhällen

Capacity: ~ 60 MW

Production: ~ 165 GWh

#### Munkhyttan

Capacity: 18 MW

Production: ~60 GWh

#### Kafjärden

Capacity: ~ 40 MW

Production: ~ 70 GWh

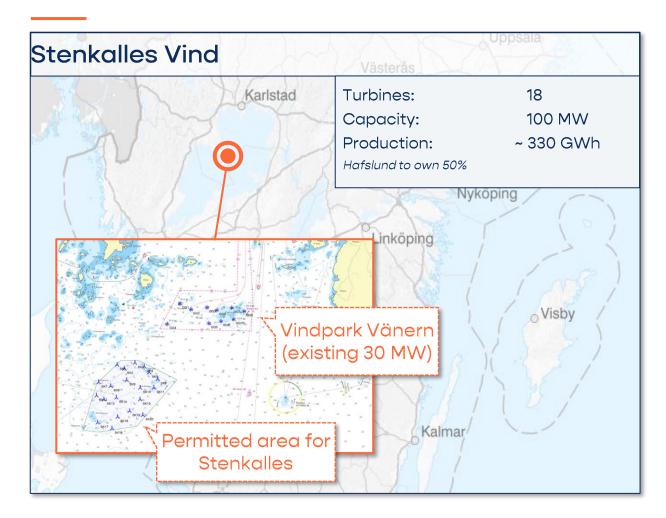
#### Hån

Capacity: 21 MW

Production: ~ 74 GWh



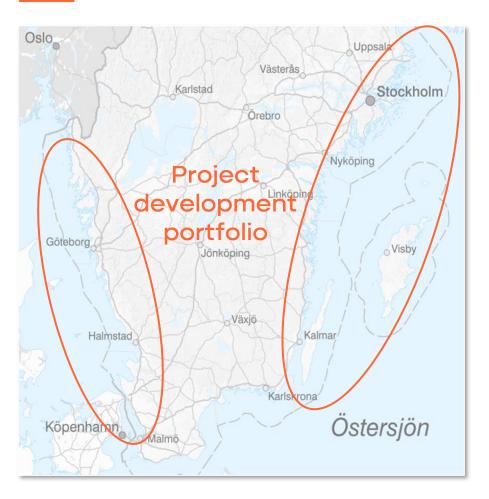
### Unsubsidized, shallow-water offshore wind in the Nordics



- Offshore wind costs are driven by:
  - Water depths
  - Distance to shore
  - Site accessibility
  - Waves/tides
  - Salt and corrosion
- Prove cost-efficiency throughout value chain in less harsh environments
  - Shallow water < 20 meter</li>
  - Less salt
  - Less waves
  - Easy access



# Nearshore pipeline requires local knowledge



- Pipeline > 2 500 MW, mainly Baltic Sea
- Duplicate knowledge from Stenkalles Vind
- Target is 2-3 fully consented projects by 2030
- Good timing with market need





# Development - "The Cloudberry way"

#### Find the right locations

 Early evaluations and pre-studies to understand the environmental impact and local conditions to find the most suitable projects

#### Find the right solutions

- Identify ways to work locally and engage local stakeholders early
- o Find the most suitable technical solutions to limit the footprint

#### Understand local needs

- Find ways for local involvement to understand and adjust plans in accordance with local opinion
- Create local value chains with local industry







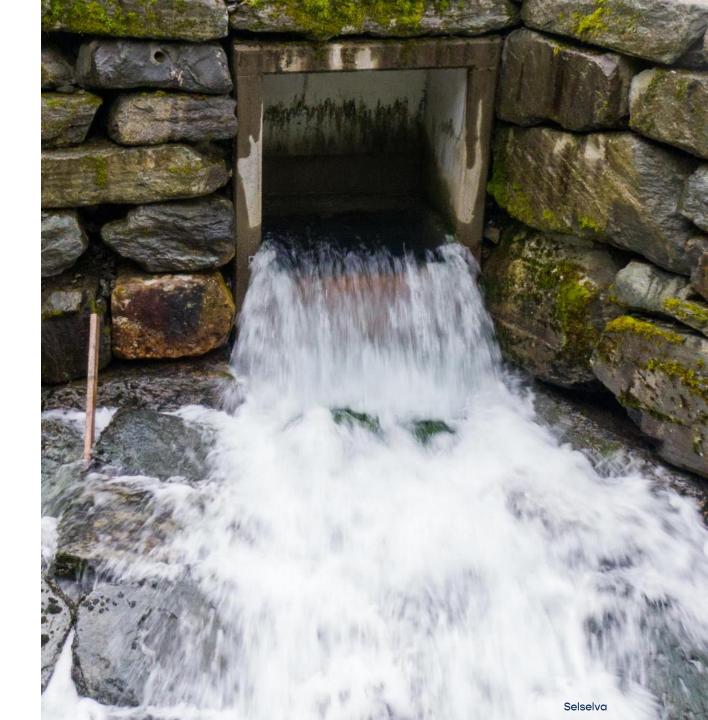
# Production

Capital Markets Day | 1 September 2022 Jon Gunnar Solli, Chief Operating Officer



# Agenda - Production

- 1 Power production and power sales
- 2 Portfolio and portfolio construction
- 3 Operational model



# Production of electric power

- Production based on the natural elements wind and water
- Wind power
  - Typically 3 bladed driven by wind with the electricity generator inside the nacelle
  - Standardised turbines based on size and provider
- Hydro-power plants are tailor made and based on 3 main types of turbines
  - Pelton: Gross head 50-1900m and less water flow
  - Francis: Gross head 50-300m and more water flow
  - o Kaplan: Gross head 3-40m and most water flow
- Small scale hydro generally uses the Pelton turbine a highly efficient and durable turbine
- The power plants are fully automated and starts and stops automatically
- Opex operation & maintenance
  - Hydro: lower opex lifetime 60-80 years
  - Wind: higher opex lifetime 25-35 years
- Land and fall lease is normally a % of gross income

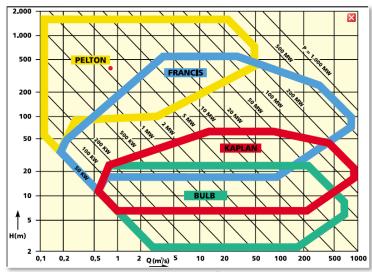
#### Wind and water turbines examples













# Sales of electric power

#### Physical power

- Physical power is traded through NordPool
  - NordPool is the legal counterparty on both the buy and sell side
- Day ahead producers have to report next days production
- Day ahead suppliers have to report next days demand
- If reported production deviates from actual production it has to be handled in the «balance market»/ intra day market
- Power is traded in EUR, but producers can choose to receive settlement in a different currency – typically SEK or NOK

#### Power price derivatives

- In principle two markets for derivatives:
  - Bilateral power purchase agreements (PPA's) fixed price contracts
  - 2. Standardized instruments on NASDAQ
- Bilateral PPA's are normally of longer duration and larger quantities of power. Off taker has traditionally been industrial companies with high energy consumption, but this is changing
- NASDAQ is the largest marketplace for power derivatives such as futures and options
  - Liquidity and volumes are low for contracts with duration of more than 12-18 months

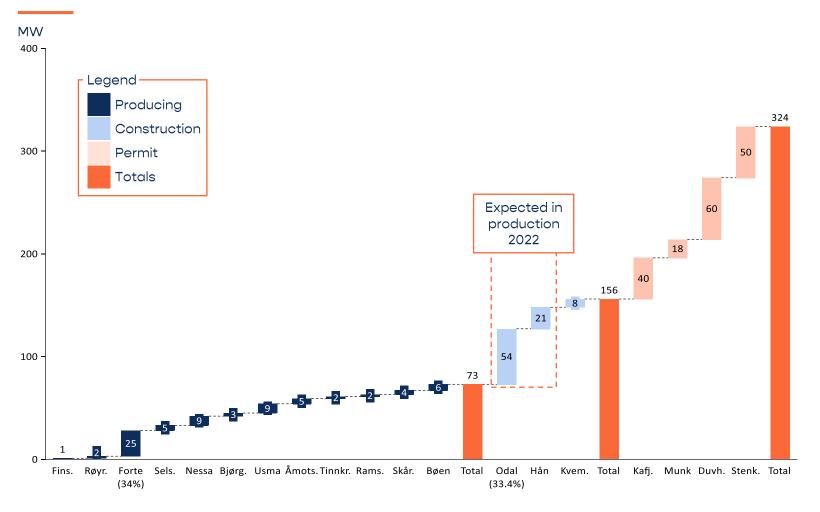






### Portfolio overview

#### Additional backlog of 420 MW not included in overview



#### Portfolio construction

- Current portfolio (producing and assets under construction) has an expected annual production of 522 GWh (156 MW)
- Main considerations in portfolio construction:
  - Asset type (wind/hydro)
  - Geographical location
  - Price area
  - Production mix in price area
  - Technical condition of the plant/park
  - Add-on possibilities
  - Additional value creation
  - ESG considerations

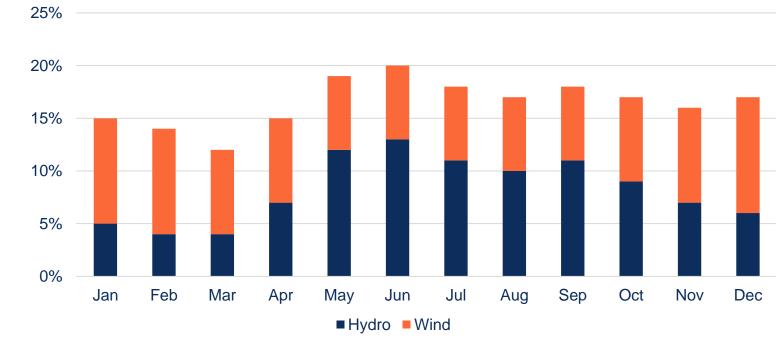


# Current portfolio – annual production profile

#### Seasonality development

- Wind and hydro are complementary
  - Wind produce more in winter
  - Hydro produce more in summer
- Aim to have a good mix between hydro and wind to achieve a stable month by month production
- Historically prices are generally higher during the winter, but the price patterns have changed over the recent year
  - Showing the importance of stable month by month production
- 2023 mix ~50/50% wind/hydro

#### Production profile - normalised production

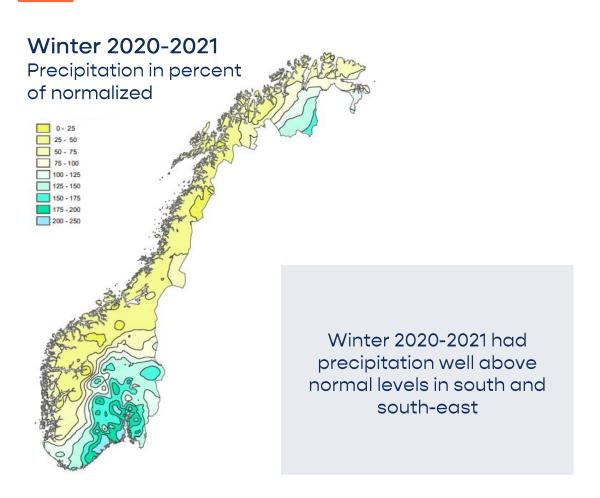


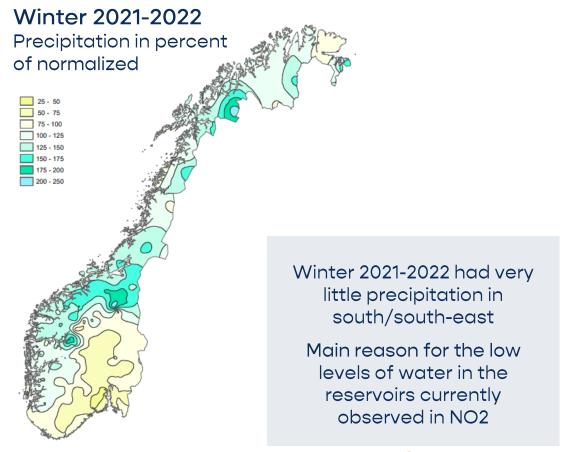
#### Normalised production assumptions

- Portfolio is based upon current assets in production in addition to Odal and Hån at 100% capacity
- Estimated normalised production profile will vary based on current years climate



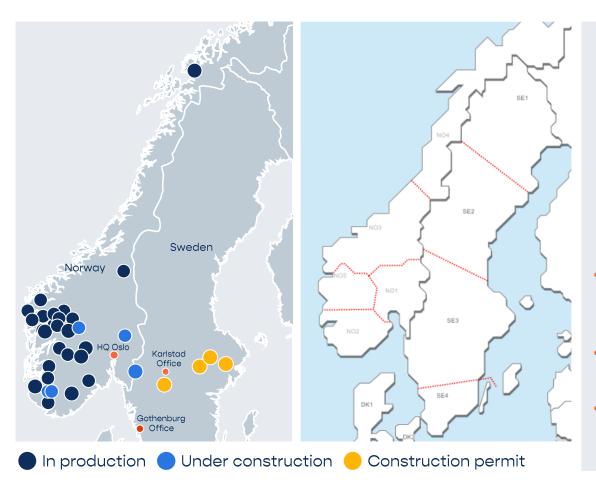
# Difference in precipitation – geographical diversification







# Portfolio diversification – price areas



#### Portfolio region mix 2022 and 2025



- Illustrative production mix based on the current portfolio incl. under construction and permitted project at estimated completion dates
- New connector between NO3 and NO5 has been given a construction permit (ready 2025)
- Shift towards a higher portion in more attractive price areas (NO1, NO2, NO5, SE3)



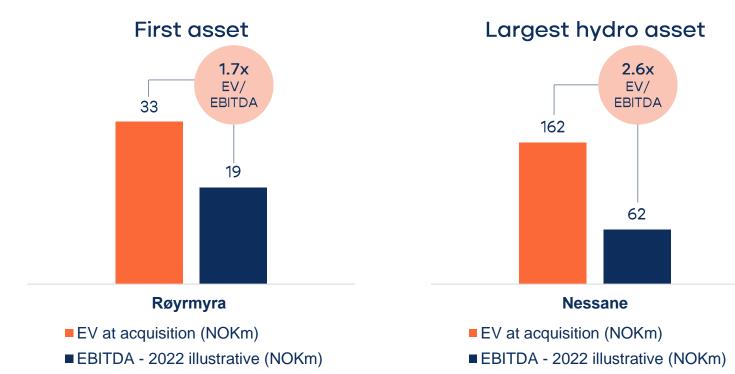
# Favorable portfolio characteristics

- State of the art turbines with high quality producers on average turbines and generators are 1.9 years old (production weighted)
- We always look for special characteristics and opportunities when we acquire a new hydro plant
  - Possibilities to actively control the flow of water (regulation) optimize production to prices
  - Revisions of concessions
  - Possibility to build further hydro plants in the same river
- Long average duration on land and fall leases; Wind 31 years Hydro 57 years
- We have implemented "Tyde" (Al tool by Captiva for monitoring of the plants) on all hydro power plants – will help us move from reactive to proactive O&M as well as improving production
- Current spread between the price areas can open interesting opportunities
- Hedging strategy initiated, currently hedged 12 GWh
  - This week hedged 4 GWh, 5 year fixed at EUR 132/MWh
- Signed fall leases for ~100 GWh of annual production in 2022
  - Concessions to be applied



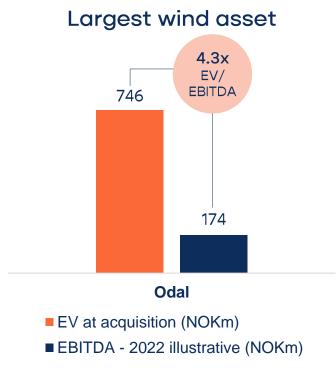


# Renewable asset values – illustrative value graph





- Income YTD Q2 22 and budgeted production multiplied with NASDAQ forward as of 22/08/22 for year to go production
- Ground rent/fall lease according to contract
- Other operating costs: actual YTD per Q2 22 + 2021 proportionate for 2022 (adjusted)
- EBITDA will vary based on actual production and realised prices



50% volume compared to normalized year



# Value sensitivities – Hån Case study (by Newsec Infra)

Assumption	Downside	Base case	Upside	Base case EV of EUR 58.4m
Power prices	-10%	Volue NO1 Q2 2022 GWA	+10%	52.3 64.6
Energy yield	P50 -5%	74 000 MWh (P50)	P50 +5%	55.5 61.4
Inflation	4.5% (2022), 3.0% (2023), 1.5% (2024→)	4.5% (2022), 3.0% (2023), 2.0% (2024→)	4.5% (2022), 3.0% (2023), 2.5% (2024→)	56 61.1
IRR (unlevered)	7.0%	6.5%	6.0%	56.2 60.9
Lifetime	-	30 years	35 years	58.4 60.7
All-in rate (levered case) <sup>1)</sup>	4.7%	3.7%	2.7%	57.9 60
Opex	+5%	11.2 EUR/MWh (real 2022)	-5%	57.9 59



# Cloudberry's operating platform









**Support** functions

Day to day operation

Maintenance & internal control

Power sales









Highly scalable, flexible and cost efficient – plug and play model for new assets





# Operations

Capital Markets Day | 1 September 2022 Stig J. Østebrøt, Chief Technology Officer



# Operations









### Maximizing renewable asset performance with insight







Team of 25+ technical and commercial industry experts

Service strategy

Unique user driven software development

Team of 15+ software developers and industrial data scientists

Product strategy



# Operations

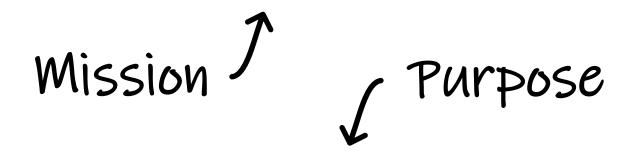








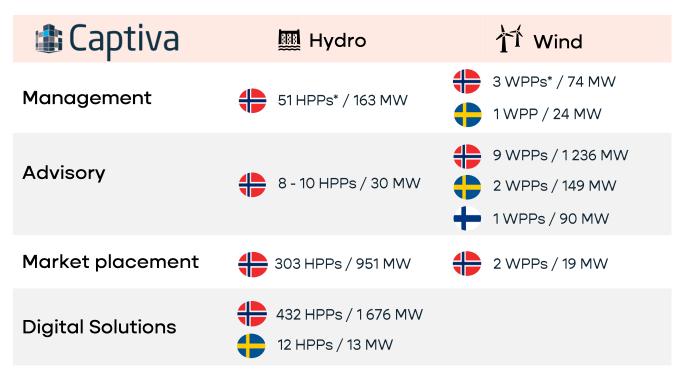
Maximizing renewable asset performance with insight



Increasing renewable energy production without negative environmental impact



### Clients



- Nordics assets, but both domestic and international clients with strong base on the continent
- Main office in Oslo (co-located with Cloudberry) and newly established office in Bern, Switzerland



# Digital Solutions: Current products



### **Portal**

Management tool collecting and visualizing high-level data

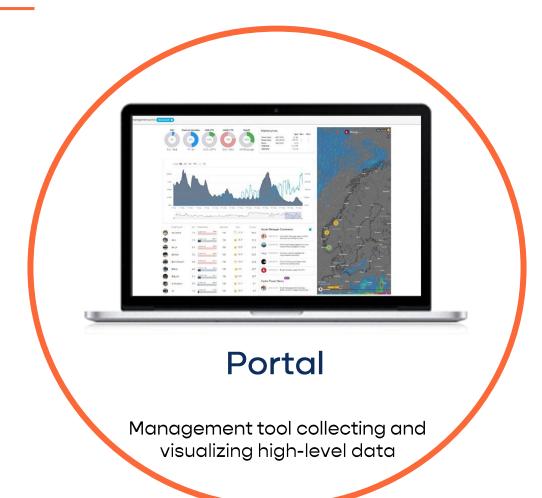


Tyde

Analytic tool on streamed sensor data to increase performance



# Digital Solutions: Current products





Tyde

Analytic tool on streamed sensor data to increase performance



### Portal





Visualization and high-level analysis of data on production, revenues, weather etc



Always updated with live data and prognosis based on forward prices



Benchmarking of more than 400 power plants in addition to weather based benchmarking



Fully transparent information flow to all stakeholders

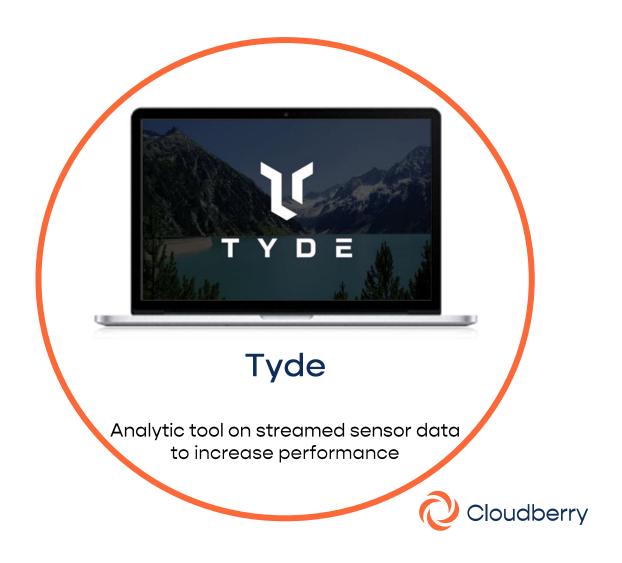


# Digital Solutions: Current products



### **Portal**

Management tool collecting and visualizing high-level data





### Example of data analytics with Tyde: Turbine needle settings example (1:2)

- Analysis by comparing physics-based theoretical calculation (white line) of power output with actual power output (red line)
- Discovered deviations in parts of the operation spectre (7-8% over 20 hours in total)



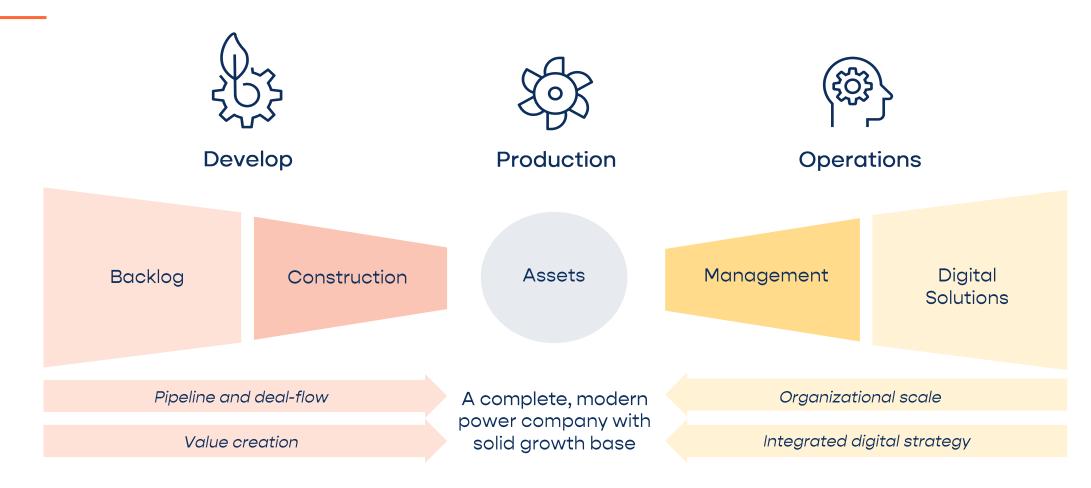


### Example of data analytics with Tyde: Turbine needle settings example (2:2)

- Found wrong settings on one of the turbine needles
- Assuming the same frequency over one year, the corrective action will increase production with 165 MWh annually (+1.6%), giving an increased revenue of approx. 800 000 NOK with current prices (70 000 NOK with normal prices)
- Plus the effect of increased component life time and reduced risk of technical breakdown
- Easy to fix without CAPEX requirements but hard to discover without proper tools



# Cloudberry leveraging on service & digital strategy





# ESG in practice



Systematic compliance monitoring on permit requirements, e.g. minimum water flow



Professional and scalable internal control systems available for all parties in a fragmented industry



Fully transparent and live information flow easily available to all stakeholders (Portal)



Web-based cost-efficient solution to document EU Taxonomy compliance (Rexonomy)





# Summary









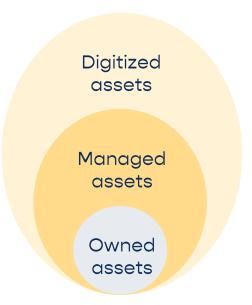
# Maximizing renewable asset performance with insight



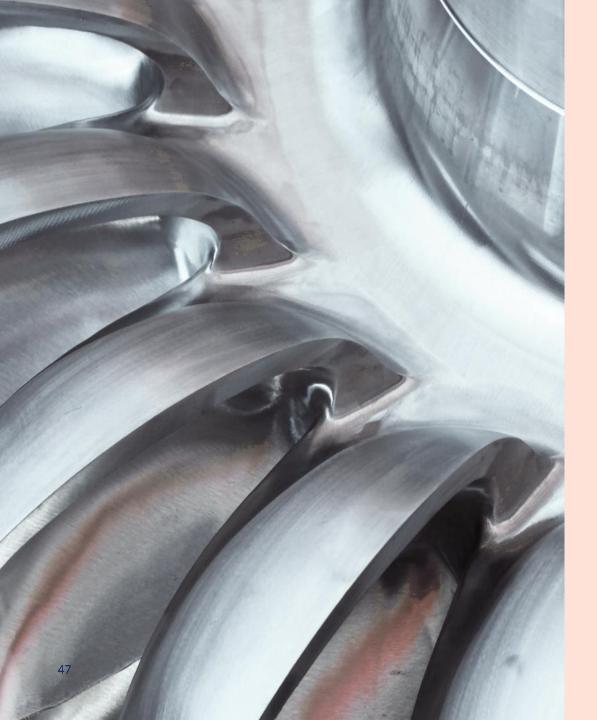




- Data-driven operator and manager of wind and hydro plants in the Nordics
- User-driven development of industrial digital solutions, for own use and separate product strategy



- We manage more than we own, and we deliver digital solutions to more than we manage
- Ensures Cloudberry to be a solid and professional asset owner with first class technology



Cloudberry is a renewable energy company, born, bred, and operating in the Nordic and in accordance with local traditions.

We own, develop, and operate hydropower plants and wind farms in Norway and Sweden.

We are powering the transition to a sustainable future by providing new renewable energy today and for future generations.

