# **OCEAN SUN** A BOLD SOLUTION TO OUR GLOBAL ENERGY NEEDS

QUARTERLY PRESENTATION Q4 2020



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# Highlights





**Euronext Growth** IPO



Performance scientifically approved



**Digital Europe** Future unicorn finalist

Fred Olsen **Offshore PV** EC funded



Significant market pull



#### VISION

# WORLD LEADING TECHNOLOGY PROVIDER TO FLOATING PV SYSTEMS



# Brief overview of Ocean Sun

### **Ocean Sun - Investment highlights**





Note: 1) "Pipeline" means potential projects where the Group is in discussions with possible customers, but where no binding contract or commitment exists. The likeliness of such projects becoming binding contracts or commitments, and/or what terms and conditions that will apply to such contracts (if entered into) are uncertain.

# Why the need for floating solar and Ocean Sun's solution?



#### Need



Renewable

energy

demand for, and dependency on electricity, which share of the total energy mix is forecasted to more than double to 45% by 2050 (DNVGL).

As the world is electrifying there is an increasing

 Simultaneously the Paris agreement and other climate commitments stress the urgency for a transformation to renewable energy sources.



- Traditional solar systems require extensive areas of land which have become a scarce commodity, especially in proximity to demand centers.
- The alternative cost is high as valuable land resources could be used for other applications such as agriculture.
- Ground mounted PV can also require significant site preparations.



Fitting Solution

- The current dominating design for floating PV is not equiped for realisation of the floating PV potential.
- Current technical solutions are too expensive, as they use significant extra material (plastic)
- In additon, current technologies are not robust enough, nor suitable for large scale deployments.

#### Solution

Solar Energy

**Floating Solar** 

Ocean

Sun

**Ocean Sun** 

**FPV** Solution

- Solar power is the most promising of all renweable energy sources and global installed capacity has increased by 95 GW in just 4 years to 140 GW in 2019.
- Due to rapididly falling costs, solar electicity generation is expected to grow 65-fold from 1% of total electricity generation in 2016 to 40% in 2050, becoming the single largest provider of electricity in less than two decades.
- Water covers 71% of our planets surface and a majority of the densely populated land areas are close to water.
- Floating PV installations has several benefits and open new opportunities for scaling up solar generation as no valuable land is used. Co-sitting with hydropower sites, existing transmission infrastructure can be used.
- Improved energy yield due to cooling effects from water.
- Ocean Sun's solution represents the lowest theoretical cost of a floating PV installation with the potential of realizing an LCOE on par, or even lower, than that of ground mount solutions.
- The unique design is more robust and enables large scale deployments in new and existing markets.
- Unprecedented energy efficiency due to direct water cooling

### Ocean Sun in brief







# Ocean Sun is the world leading technology provider to floating PV systems



#### The technology

Ocean Sun's core innovation, a floating power system with solar panels mounted on a thin hydroelastic membrane, offers a unique solution to the world's energy needs.

Our technology offers renewable energy at world-beating cost levels enabled by the low material use and the water body's cooling effect, which lowers the solar panels' operating temperature and increases their power output.

Ocean Sun owns an IPR portfolio, including numerous patents and patent applications in all major markets. We do not manufacture components but offer license agreements, whereby developers and independent power producers are granted rights to deploy our technology for their projects.

#### System components



# Ocean Sun's combined value proposition is the worlds best floating PV system



#### Ocean Sun's Floating PV solution



Standard PV panels tailored for installation on membrane attached to buoyancy rings

- Uses less plastic and a simplified mooring resulting in the lowest cost system on the market
- Resistant to degradation from salt water and more durable in waves and wind (tested and approved for Class 4 typhoons of 275 km/h winds)
- Boosting cell efficiency and power output (up to 10%) by direct water cooling
- Effective transportation (10-15x less logistics need) and installation at scale, reducing total investment costs

#### Conventional Floating PV systems



Standard PV panels installed on metal frames on blow-moulded plastic pontoons

- High material use, large transportation volume and suboptimal installation at scale -> higher cost
- Many moving parts and gaps, making them prone to degradation from waves and wind, limiting deployments in non-sheltered places
- Air-cooled -> high operating temperature

#### versus

# Past installations have proven the technology's durability, performance and ease of installation







#### Annual FPV installations<sup>1</sup> (MWp)



#### Capacity vs. market potential (GWp)



Ocean Sun is a technology provider and offers detailed design and the right to use its technology in exchange for a license fee per Wp installed





### Current pipeline is extensive despite limited marketing





Operations and business developments

## Listing on Euronext Growth



# Highlights

In October, Ocean Sun successfully closed a private placement of NOK 100 million. The private placement was followed by a listing on Euronext Growth with a listing price of NOK 18kr per share and first day of trading on the  $26^{th}$  of October 2020.

By the end of the quarter Ocean Sun had more than 1200 shareholders.



#### **Stock Price development**



## Offshore floating solar power in the Atlantic Ocean



## **Project details**

On the 18<sup>th</sup> of January Ocean Sun announced that it will test its floating solar solution in offshore conditions outside the Canary Islands. The testunit will be built under a Horizon 2020 project where Ocean Sun is part of a consortium consisting of Ocean Sun, Fred Olsen Renewables, Innosea, the Technological Institute of the Canary Islands (ITC) and the Oceanic Platform of the Canary Islands (PLOCAN).

The project has a duration of 30 months, a total budget of 4 million euros and a grant ratio of 70%. Ocean Sun's total grant under the project is estimated to ~900 thousand euros. The project starts in January 2021 with design and tests in basin laboratory and will be followed by sea trials. Following the installation, all aspects of the system will be analyzed and a plan for further commercialization and large-scale deployments will be developed.

The offshore test location poses challenging sea conditions with up to 10m wave-heights and high winds. As such the project is an excellent opportunity for Ocean Sun to explore the outer limits of its technology. The project will also serve to qualify and certify Ocean Sun's patented floating solar technology for offshore applications in non-sheltered locations.

Ocean Sun's technology is perhaps the only economically feasible solution for such exposed areas and as such this project opens up for floating solar in vast costal areas, for e-fuel production, hydrogen/ammonia, or desalination purposes.



# Statkraft installation, 2 MWp at Banja HPP



# Project update

Ocean Sun has been contracted by Statkraft to build a 2MWp full scale demonstrator system on the Banja reservoir in Albania.

The project consists of in total four 0.5 MWp floaters and will be delivered in two phases of 0.5 MWp and 1.5 MWp respectively.

The first ring has been successfully constructed and it is forecasted to be commissioned during Q1 or early Q2.

Second phase of the project is expected to start shortly after commissioning of the first ring.



## Saemangeum, South Korea



# Project update

The Seamangeum Seawall project in South Korea has a total scope of 2.1 GWp and is as such expected to be the largest floating solar project in the world. It will be built in brackish water at an exposed location with relatively large waves and strong winds. As such, the Ocean Sun technology is well positioned to take a large portion of the total scope.

Due to Covid-19 there are delays from the Saemangeum government agency and no further contracts have been signed. However, Ocean Sun is positioning for upcoming tenders by establishing a local supply chain.



# Magat dam pilot with Scatec owned SN-Aboitiz Power (SNAP)



# Project update

In June 2019 Ocean Sun commissioned a 220 kWp pilot system for SN-Aboitiz Power (SNAP) on the Magat Dam. SNAP is a joint venture between SN Power (now Scatec) and local energy producer Aboitiz Power.

After being operative for one and a half years, the pilot has gone through two typhoon seasons and performs as expected. SNAP's CEO, Joseph Yu, recently announced that SNAP view the pilot as a success and that it has expansion plans for floating solar. In the first phase they are investigating an expansion of 67 MWp on the Magat reservoir, with potential further expansions on other locations<sup>1</sup>.

Also, Scatec have made positive announcements regarding the potential of floating solar<sup>2</sup>.



1) Joseph Yu, CEO of SNAP, Manila Standard (link)

2) Scatec Fourth quarter 2020 presentation available here

# Ocean Sun's project pipeline



# Region overview

#### EMA – Covered by Oslo office

- Main focus on Europe with several large Norwegian and European leads with a global footprint
- Few current FPV installations in Europe, large interest in southern part

#### SE Asia + Oceania – Covered by Singapore office

- Large interest in FPV from Asia Development Bank and the governments of Philippines, Vietnam, Laos, Thailand
- Ocean Sun is well established in the region with local demonstration systems and possibility to withstand strong winds

#### NE Asia – Covered by Shanghai office

- NE Asia accounts for 90+% of total installed FPV capacity, China ~60%
- China, South Korea and Japan has relatively large spread of FPV and will remain key markets going forward
- Ocean Sun focus on reliable partners/leads н.

#### Americas – Covered by Oslo office

- Hot market in South America, especially Brazil, Colombia and Mexico
- Discussions with state owned utilities and large power users
- Hydro/Solar opportunity especially strong in Brazil

# Leads per region





leads

**Pipeline value** 

# Nenad Keseric joins Ocean Sun as Chief Operating Officer (COO)



# About Nenad

- PhD degree in Energy Economics from Vienna University of Technology (TU Wien)
- 15 years experience in the energy industry
- Operations manager of onshore wind and the Hywind- world's first floating wind turbine in Equinor (Statoil)
- Board Member at the Marine Energy Test (MET) Centre at Karmøy, representing Equinor since 2012
- Leading development of regional offices and large projects within major international energy companies - Statkraft, Norway and Verbund, Austria



### **Developments**



## Other developments

As previously communicated Ocean Sun's **patents** are already approved in countries such as the US, UK and Norway. It has now also been accepted in Chile and by the Eurasian Patent organization.

Ocean Sun has hired Dr. Nenad Keseric as its new Chief Operating Officer (COO), from 1st of May. The current COO, Alexander Telje will take on the position as Chief Commercial Officer.

Ocean Sun has been awarded as one of three finalists in DIGITALEUROPE's future unicorn award 2021.

After studying Ocean Sun's system outside Skaftå Norway, scientists at the Institute of Energy Technology (IFE) have quantified the cooling effect provided by Ocean Sun's FPV system due to the direct contact with water. IFE found that Ocean Sun's water-cooled solution had on average 5-6% higher yield compared to the pontoon-based design and that the additional yield increase to more than 10% in periods with high irradiance.

Ocean Sun experience a **significant market pull for its technology** and have added many new leads to its pipeline with opportunities in Europe, the Philippines, South America and China.

# Outlook and priorities







Protect & Maintain IP



Continuous Development



**Global Partnerships** 



#### Large customers



Revenue from license & partnerships



# Financials

- Profit and loss
- Balance sheet
- Cash flow
- Equity statement



#### Income Statement

	Unaudited	Unaudited	
NOK'000	01.10 – 31.12.2020	2020	2019
Sales	428	1 146	1 917
Contributions	1 069	4 983	6 312
Total revenue	1 497	6 129	8 228
COGS	(1 285)	(2 945)	(8 167)
Gross profit	213	3 184	61
Personnel expenses	(2 367)	(8 477)	(8 048)
Other OPEX	(1 544)	(5 390)	(3 153)
EBITDA	(3 698)	(10 682)	(11 140)
Depreciation	(4)	(15)	(8)
Net financials	(2)	104	115
Net income	(3 704)	(10 594)	(11 034)

For accounting principles, please refer to Annual report 2019.

Please note that Ocean Sun has changed the classification of patent costs and costs associated with subsidiaries from COGS to Other OPEX in 2020.

#### Comments to income statement

Total revenue amounted to NOK 1.5 million in Q4 and NOK 6.1 million in the full year 2020, of which NOK 5 million related to R&D contribution from Innovation Norway and The Research Council of Norway. Sales of ~1.1 million in 2020 related to final payment of SN Power installation and first payment for Statkraft installation.

Both sales and COGS were down on a like-for-like basis in 2020 compared to 2019, which is a result of Ocean Sun's shift towards a license-based revenue model (as compared to selling a power plant).

Personnel expenses is the main cost driver. In Q4 as well as large parts of 2020 the personnel force consisted of 6 employees in Norway as well as 2 employees in Singapore and China, which costs are included in Other OPEX.

### **Balance** sheet



#### Balance sheet

	Unaudited	
NOK'000	31.12.2020	31.12.2019
Assets		
Office equipment	56	36
Investments in subsidiaries	280	30
Total fixed assets	336	66
Accounts receivables	_	11
Other receivables	6 607	4 714
Cash and cash equivalents	94 883	14 510
Total current assets	101 489	19 234
Total assets	101 825	19 301
Equity and liabilities		
Total equity	100 096	14 998
Accounts payable	639	757
Public duties payable	118	400
Other short-term liabilities	973	3 145
Total current liabilities	1 729	4 303
Total liabilities	1 729	4 303
Total equity and liabilities	101 825	19 301

#### Comments to balance sheet per 31.12.2020

Following the successful private placement of NOK 100 million in October, cash and cash equivalents amounted to ~95 million as per 31.12.2020, of which NOK0.7 million was restricted cash.

Equity ratio amounted to 98.2% and the Company had no interest-bearing debt. Other short-term liabilities consisted of provisions for personnel expenses.

Other receivables included receivables for material purchased on customers behalf as well as accrued revenue related with R&D projects.

During 2020, Ocean Sun established a Chinese subsidiary and invested NOK 250 thousand of share capital.

For accounting principles, please refer to Annual report 2019.



#### Cash flow statement

NOK'000	Unaudited 01.10 - 31.12.2020	Unaudited 01.01 - 31.12.2020	01.01 - 31.12.2019
Net income	(3 704)	(10 594)	(11 034)
Depreciation	4	15	8
Change in accounts receivables	735	11	(11)
Change in accounts payables	314	(119)	102
Change in other operating assets	(5 837)	(2 708)	(1 173)
Cash flow from operating activities	(8 488)	(13 395)	(12 107)
Cash flow from investing activities	(16)	(284)	(75)
Cash flow from financing activities	93 674	94 052	1 639
Net cash flow in the period	85 171	80 373	(10 543)
Cash and cash equivalents at the beginning of the period	9 712	14 510	25 052
Cash and cash equivalents at the end of the period	94 883	94 883	14 510

### Cash development 01.10 - 31.12.2020

Cash flow from operations amounted to ~-8.5 million NOK in Q4'20, primarily as a result of negative net income and prepayments made for material purchased on behalf of a customer.

Net proceeds from the private placement amounted to ~94.7 million after deduction of transaction fees.

Total cash and cash equivalents as per 31.12.2020 amounted to ~NOK 95 million. The cash position of the company is sound.

For accounting principles, please refer to Annual report 2019.



Changes in equity (Unaudited)					
NOK'000	Share capital	Share premium	Other Equity	Retained Earnings	Total
At 1st of January 2020	384	32 403	(6)	(17 783)	14 998
Profit/Loss for the period	_		_	(10 594)	(10 594)
Share capital increase	66	101 950	_	_	102 017
Costs for capital increase	-	-	(6 326)	-	(6 326)
At 31 December 2020	450	134 354	(6 331)	(28 377)	100 096

For accounting principles, please refer to Annual report 2019.



# Appendix

Share information



#### About the Share

Ocean Sun is since 26<sup>th</sup> of October 2020 listed on Euronext Growth Oslo under the ticker OSUN. The listing price for Ocean Sun was NOK 18 kr per share and the price as of 31 December 2020 was NOK 48.5 kr per share.

The Company has 44,986,200 outstanding shares. The share capital as of  $31^{st}$  of December 2020 amounted to NOK 44,986 kr.

#### Financial calendar

Event	Date
Annual report 2020	07.04.2021
Q1 report	11.05.2021
AGM	20.05.2020
Q2 Report/half year	19.08.2021
Q3 Report	09.11.2021
Q4 report	10.02.2022

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