

# INDUSTRIAL SOLAR

renewables onsite



## Interim Report Q1/2020

Prepared by

**Industrial Solar Holding Europe AB**

[www.industrial-solar.se](http://www.industrial-solar.se)

May 29, 2020

A close-up portrait of actor Leonardo DiCaprio. He has light brown hair styled back, blue eyes, and a well-groomed beard and mustache. He is looking slightly to his left with a neutral expression.

Climate change is severely impacting the health of our planet and all of its inhabitants, and we must transition to a clean energy economy that does not rely on fossil fuels.

— *Leonardo DiCaprio* —

AZ QUOTES

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### Statement by the Board of Directors

The Board of Directors provides their assurance, that the interim report provides a fair and true overview of the company's operation, financial position and results.

Härnösand on May 26<sup>th</sup> 2020, Board of Directors

Joakim Byström	Chairman of the Board
Christian Zahler	Board member and CEO
Olle Olsson	Board member
Luca Viscouso	Board member
Tobias Schwind	Board member
Joao Gomes	Board member

# 1 Summary of the Q1 report

**1<sup>st</sup> Quarter from 01.01.2020 to 31.03.2020 (01.01.2019 – 31.03.2019)**

Results in Brief in TSEK	01.01.20	01.01.19	01.01.19
	31.03.20	31.03.19	31.12.19
The company's sales amounted to	577	421	827
Increase in finished goods, inventories and work in progress	0	0	0
Other operating income	472	44	2.015
<b>Total Income</b>	<b>1.049</b>	<b>465</b>	<b>2.842</b>
Cost of Material	-192	-372	-715
Personnel costs	-1.359	-1.570	-7.283
Other operating costs	-731	-654	-3.617
Other operating expenses	-6	0	-57
Depreciation	-49	-31	-200
<b>Total Costs</b>	<b>-2.331</b>	<b>-2.627</b>	<b>-11.815</b>
<b>Earnings before interest and taxes EBIT</b>	<b>-1.282</b>	<b>-2.162</b>	<b>-8.973</b>
Financial income/expenses	-3	0	44
<b>Loss after financial items</b>	<b>-1.285</b>	<b>-2.162</b>	<b>-8.929</b>
Number of Shares	11.393.549	7.596.495	7.596.495
Result per share amounted	-0,11	-0,285	-1,175
Cash available end of period	29.401	12.294	9.116

## Results in Brief

Results in Brief in TSEK	01.01.20	01.01.19	01.01.19
	31.03.20	31.03.19	31.12.19
Operating Income	1.049	465	2.842
Operating Costs	- 2.331	- 2.627	- 11.815
Operating Result	- 1.282	- 2.162	- 8.973
<b>Result of the Period</b>	<b>- 1.285</b>	<b>- 2.162</b>	<b>- 8.929</b>

## 2 Note from the CEO

The first quarter of 2020 was a very dynamic time - dominated by the acquisition of SolarSpring GmbH and by our rights issue, which was oversubscribed by 15,4 %.

I was impressed by number of shares that had been subscribed without rights, which showed that more and more people want to combat climate change, believe in our business model and trust in our motivation and our team's performance to bring our solutions to the market and to lower the emissions of the industrial sector.

Our colleagues responsible for business development were able to expand our sales network through cooperation with several new strategic partners.

"Welt der Wunder TV" made an excellent TV documentary about our technology, the installations in Jordan and the stakeholders involved.

The ORC turbine from France was finally integrated into the existing Fresnel installation at Qatar Foundation in February. Unfortunately the commissioning had to be postponed due to the Corona crisis.

Overall Industrial Solar is on plan with technology-, system- and project-development. Yet the market is lacking behind as governments don't dare to rise the price of CO2 to a reasonable level, which is an indispensable step to fight climate change.

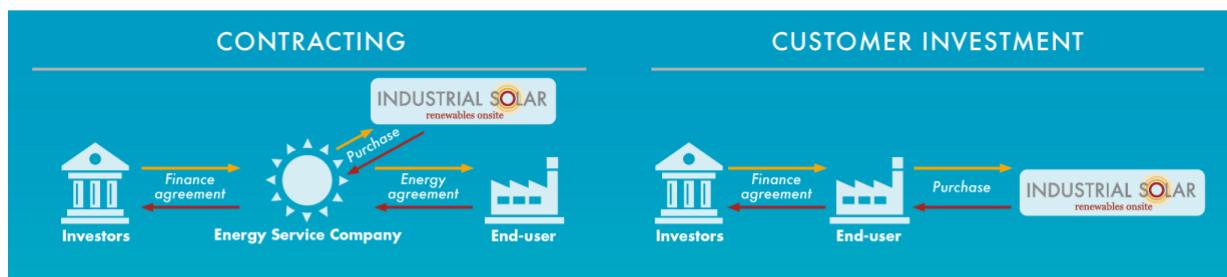


Christian Zahler  
CEO Industrial Solar Holding Europe AB



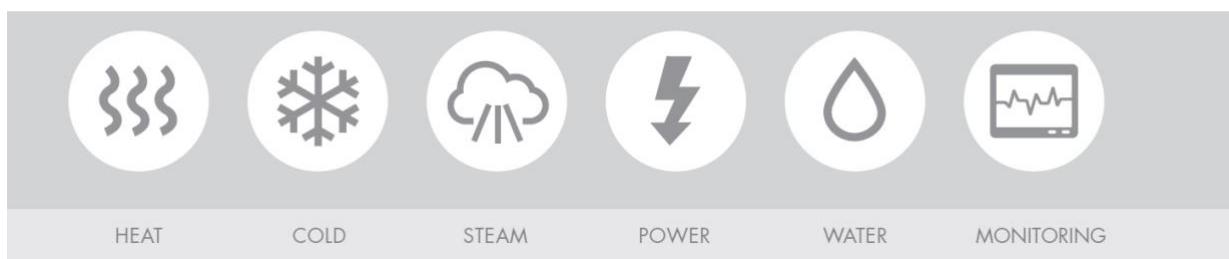
### 3 Energy Contracting and a Holistic Approach

Financing has repeatedly been identified as a major challenge for industrial decarbonization. It can be overcome by the engagement of third party investors offering energy services through which costs and risks are moved from the end-user to the Energy Service Companies (see graphic below) which are better equipped to cover costs and handle risks and make profits by providing the services. Industrial Solar embraces this approach by designing its solutions to meet investor requirements (e.g. operation stability) and by building partnerships with investors.



Besides a suitable business model, industry also needs a suitable technical approach. Holistic approaches considering heating, cooling, power and water will continually become more important. Comprehensive approaches allow to realize synergies in plant design and operation – thereby minimizing investment and operation costs – and to ultimately add more value to end-users.

With its strong background in sustainable process heating and cooling, Industrial Solar is well positioned to benefit from this trend. To broaden our outreach, we will continue to develop new capacities (e.g. power generation), build strong partnerships with other technology providers and also undertake strategic investments to complement the portfolio. Thereby, Industrial Solar will strengthen its position as one-stop-shop for sustainable energy solutions in industry.



## 4 Acquisition of SolarSpring

For industries with a high process heat demand, water treatment is also often an essential issue. SolarSpring GmbH is an equipment manufacturer of innovative membrane-based water treatment systems. The company is an absolute pioneer in the field of membrane distillation for industrial wastewater treatment. Through years of experience, they have developed innovative systems like their rEvap (recovery evaporation) membrane technology which provides a solution for many industrial sectors which either aim to reuse process liquids or where sensitive liquid products require concentration. This can include processes like recovering acids in the metallurgical industry, concentrating salty pickling solutions in the food industry or reducing the volume of a hazardous mixed waste stream before disposal.

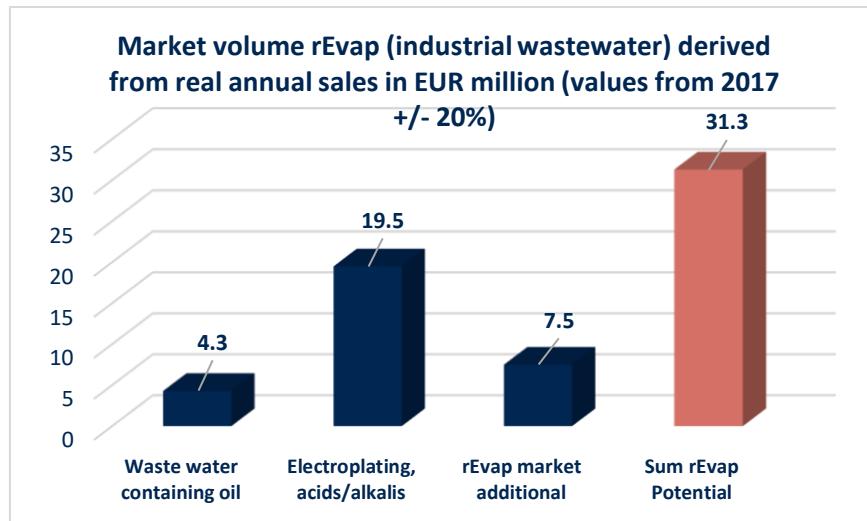
Their novel technology allows the recycling and reuse of valuable compounds of the wastewater and the reduction of wastewater volume. SolarSpring provides the entire value chain from conceptual design to turnkey installation. Where conventional wastewater treatment methods reach their limits or the disposal of process fluids exceeds the financial scope, SolarSpring technology steps in. By combining the technologies of Industrial Solar and SolarSpring, waste heat from thermal processes can be used to power the rEvap systems which need only a temperature level of 85 °C.

Seeing the possibilities which can evolve from a combination of the technologies of Industrial Solar and SolarSpring initiated ISHE's decision to acquire SolarSpring. The goal of this acquisition is to offer a broader basis of technologies to industrial customers on the way to a sustainable circular economy.

Apart from the obvious technological match between Industrial Solar and SolarSpring, there is also a clear strategic match in terms of markets and customers and such sales activities.

### **A paradigm change in water (re)use and conservation**

In their latest study, Roland-Berger forecast a growth in sustainable water management of 4.6% per year until 2025. This is no coincidence since water scarcity will be one of the major collective challenges we must face throughout all industrial processes. In the BMU report (Federal Environment Ministry) "GreenTech made in Germany 2018" the water industry is predicted to have one of the highest expansion rates of all industries.



- **Market potential assessment for the market segment „industrial wastewater“**
- **Source: published financial statements and market figures from market participants in the target market of „industrial water treatment“, 2017**
- **The Green-Tech segment has a growth forecast of 7% (Roland Berger 2018)**

The Sustainable Development Goals are a universal call to action to end poverty, protect the planet and improve the lives and prospects of everyone, everywhere. The 17 goals were adopted by all UN Member States in 2015, as part of the 2030 Agenda for Sustainable Development which set out a 15-year plan to achieve the goals.

With the new innovative rEvap technology and the MBS drinking water units SolarSpring will help to achieve three sustainable development goals.

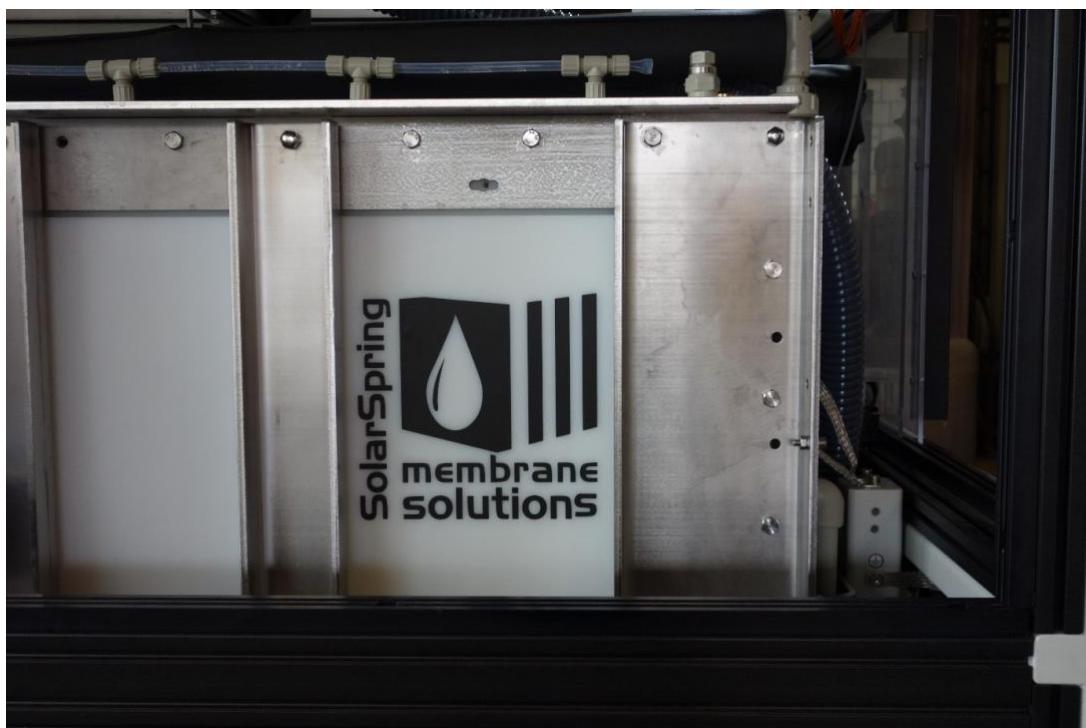


### Reference projects

#### ReWaCem

When it comes to cleaning up the industry and lowering its environmental impact, the steel and metallurgical sector holds a large scope for improvement. High amounts of energy and chemical compounds are used to manufacture semi-finished products and the industry sector is huge. Within the ReWaCem project, an innovative membrane-based unit was developed which is capable of recovering pickling acids while using available waste heat as an energy source. SolarSpring's

membrane distillation technology was one of the two key components which was successfully operated at DEW in Hagen, Germany. In this win-win scenario, cost reductions for the respective company can be achieved while helping the environment by reusing harmful and aggressive acids. This reference has opened the doorway to various other potential applications such as the recovery of gold and palladium in the printed circuit board industry.



### Ongoing projects

#### *BrineMine*

Future technologies increasingly rely on a supply of minerals and metals. To avoid a high dependence on imports, further research is required on how to mine these resources efficiently and in an environmentally sustainable manner. Within the BrineMine project, the high content of minerals in geothermal brines is to be exploited by means of an innovative process chain which will additionally utilize the hot temperature of the brine, enabling a CO<sub>2</sub> neutral operation. The big challenge is the composition of the brine and the extraction of the pure mineral, in this case lithium. After pretreatment, a SolarSpring membrane distillation unit will serve as the process step capable of increasing the lithium concentration in the brine to a level of value. Other technologies would fail due to the high salt content of the geothermal brine, but by virtue of the polymer material used in the unit and the low-pressure operation, promising results are expected. The unit will be facing its first trial in August 2020 in Insheim, Germany, after which plans will be made to pilot an upscaled version in Chile, known for its abundance of mineral rich geothermal springs.

### *MD\_Ammonium*

A key strategy to a more sustainable economy is closing water and substance loops in industrial and municipal wastewater treatment. A high potential example of circular economy can be found in the recovery of ammonia from anaerobic digestates in municipal wastewater. This is converted to fertilizer with the help of a membrane distillation unit and then reintroduced into the ecosystem by spraying the pumpable solution on agricultural land. The novel pilot plant will be going to trial in the summer months of 2020 at the waste water treatment facility of Freiburg, Germany.

## **Outlook**

### *Public funded projects*

A total of 4 public funded R&D projects have been applied for on national and EU level. Evaluations are currently being conducted with expected starting dates in early 2021, provided positive evaluation. The total funding volume requested lies at 0,77m€. Two national R&D projects are still ongoing with a remaining funding volume of 0,2m€.

### *Industry Customers*

A strong increase in contracted pretesting has been observed within the last 12 months as a result of the increasing need of various industries to find new water treatment solutions for industrial effluents. The current volume of customer offers amounts to 0,451m€ of which approximately half is allocated to drinking water systems and half to industrial water treatment units and pretesting. No difference was observed in the lower volume customer contracting due to the Covid- 19 crisis, but larger investment decisions are being held back by most companies until the outcome of the crisis becomes more predictable.

### *General*

Due to the increasing pressure on water intensive industries to find new technical solutions suitable for improving the environmental sustainability and cost efficiency of their processes, the outlook for wastewater treatment systems remains positive. Short term delays in decision making must be expected but might be compensated by a V-shaped dynamic once governmental support programs are activated.

## 5 Main Activities in Q1

### **ISHE board decides to conduct a rights issue and to sign term sheet for the acquisition of SolarSpring GmbH**

On 8 January 2020, Industrial Solar Holding Europe AB (ISHE) announced that the Board of Directors had resolved to launch a rights issue of SEK 24.7M with preferential rights for existing shareholders.

Background of this right issue was the planned acquisition of the company SolarSpring GmbH, a spin-off from the Fraunhofer Institute for Solar Energy systems in Freiburg and a manufacturer of innovative membrane-based water treatment systems.

On March, 24th ISHE announced that the acquisition of SolarSpring GmbH was accomplished.



### **Industrial Solar on TV**

The German TV channel 'Welt der Wunder' produced a documentary about Industrial Solar for their new format 'Green Life' which was broadcast in March.

Industrial Solar's technology for direct steam generation and cooling is explained, and interviews with customers and local stakeholders give an interesting insight into future perspectives and highlight the advantages and possibilities of such sustainable technologies for industry.

### **Higher efficiency at lower costs - Industrial Solar's LF-11 Fresnel collector cracks the mark of 70% optical efficiency**

The engineers of Industrial Solar are constantly working on their Fresnel collector design to increase efficiency and to bring down cost. A raytracing study by Fraunhofer ISE proved that they were successful as the optical efficiency reached the 70% mark.

The latest version of Industrial Solar's LF-11 Fresnel collector was upgraded regarding the width of the individual mirror rows as well as the maximum string length. Accordingly, the optical efficiency for perpendicular incidence  $\eta_{0\perp}$  increased by 5,1% from 63,5% to 68,6% in comparison to the previous collector version.

Additionally, the standard vacuum receiver from the CSP sector, which is a core component of the collector, has been improved in the last years, having now a shorter glass-metal-seal and better optical and thermal properties. Another improvement of the collector installation is the increased string length that was optimized for 24 modules using only a single drive in each mirror row, which reduces costs and installation time.

### **Industrial Solar installs Organic Rankine Cycle Turbine in Qatar**



Industrial Solar installed a solar thermally driven Organic Rankine Cycle Turbine in Doha, Qatar. The showcase project is an upgrade for a Fresnel Collector built in 2013 at the Qatar Foundation Science and Technology Park.

### **Innovative and cost-efficient solution for rooftop integration of Fresnel solar collectors**

Industrial Solar launches a new version of its LF-11 Fresnel collector that reduces both costs and weight of the substructure by up to 50%. The new feature uses integrated lightweight platform walkways along the collector structure, permitting integration onto uneven roofs.

## **6 Outlook, Risk and Uncertainties**

### **Projects**

The two Horizon 2020 projects Ship2Fair and Friendship with a total funding volume of about 2 m€ will be a strong support for our company in the next three years.

Several proposals for R&D projects on national level with a total funding volume of nearly 1 m€ that have been submitted in 2019 have been evaluated positively and postponed to 2021 due to the Covid-19 crisis.

We also expect a positive effect through the partnership with the French financial partner Kyotherm which enables us to offer energy contracting worldwide.

### **Risk and Uncertainties**

The market for solar process heat systems is at an early stage but is gaining momentum as the pressure for companies to reduce their carbon footprint is getting continuously stronger.

Due to the Covid-19 crisis many potential customers are postponing the investment decisions. Also, the strong decline of the oil price has a negative impact. On the other hand, many governments are preparing economic programmes to overcome the effects of the Corona crisis, most of them with a focus on carbon reduction. Thus, the business is difficult to predict.



**'The fossil fuel industry is determined to burn 5 times more fossil fuel than the planet's atmosphere can begin to absorb.'**

**Bill McKibben**

## 7 Q1 Financial Review (Income/Balance/Cash-Flow)

### Comments to the Financials:

The financial results are according to the companies plan. ISHE is a development company and thus has cost for technology- and market- as well as project development. This development is financed by the proceeds from the initial public offering and the rights issue in January 2020 at Spotlight.

The numbers are consolidated from Industrial Solar GmbH and SolarSpring GmbH, both located in Freiburg / Germany and each a 100% subsidiary and from Industrial Solar Holding Europe AB/Sweden. The numbers have not been reviewed by the companies auditor KPMG Sundsvall, Sweden.

### Consolidated Income Statement

	Amounts in TSEK	01.01.2020 31.03.2020	01.01.2019 31.03.2019	01.01.2019 31.12.2019
<b>Operating income</b>				
Sales		577	421	827
Increase in finished good and inventories and work in progress		0	0	0
Other operating income		472	44	2.015
<b>Total</b>		<b>1.049</b>	<b>465</b>	<b>2.842</b>
Cost of materials		-192	-372	-715
Personnel costs		-1.359	-1.570	-7.283
Other external expenses		-725	-654	-3.560
Other operating expenses		-6	0	-57
Depreciation		-49	-31	-200
<b>Total</b>		<b>-2.331</b>	<b>-2.627</b>	<b>-11.815</b>
<b>Earnings Before Interest and Taxes (EBIT)</b>		<b>-1.282</b>	<b>-2.162</b>	<b>-8.973</b>
Financial income		0	0	415
Financial expenses		-3	0	-371
<b>Financial expenses</b>		<b>-3</b>	<b>0</b>	<b>44</b>
<b>Loss after financial items</b>		<b>-1.285</b>	<b>-2.162</b>	<b>-8.929</b>
<b>Loss for the year</b>		<b>-1.285</b>	<b>-2.162</b>	<b>-8.929</b>

## Consolidated Balance Sheet

Amounts i TSEK	31.03.2020	31.03.2019	31.12.2019	Amounts i TSEK	31.03.2020	31.03.2019	31.12.2019
<b>Assets</b>				<b>Equity</b>			
<b>Non-current assets</b>				Share capital	1.122	748	748
Intangible assets				Unregistered share capital	0	0	0
Intangible fixed assets	302	2	2	<b>Total</b>	1.122	748	748
<b>Total</b>	<b>302</b>	<b>2</b>	<b>2</b>				
<b>Machinery and equipment</b>				Accumulated profit or loss	-10.880	-2.136	-2.278
Goodwill	5.045	0	0	Share premium account	37.295	14.670	14.596
Machinery	869	228	181	Shareholder's contribution received	0	1.034	0
Equipment	1.254	182	190	Loss for the period	-1.285	-2.162	-8.929
<b>Total</b>	<b>7.168</b>	<b>410</b>	<b>371</b>	<b>Total</b>	<b>25.130</b>	<b>11.406</b>	<b>3.389</b>
<b>Financial assets</b>				<b>Total equity</b>	<b>26.252</b>	<b>12.154</b>	<b>4.137</b>
Shares in group companies	0	0	0	<b>Non-current liabilities</b>			
Due from Group companies	0	0	0	Loans from Group companies	0	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Total non-current assets</b>	<b>7.470</b>	<b>412</b>	<b>373</b>	<b>Current liabilities</b>			
<b>Current assets</b>				Accounts payables	1.219	455	103
Inventories	277	0	0	Payments received	1.204	0	743
Finished good and merchandise	16	16	16	Other short term liabilities	8.594	1.786	3.352
<b>Total</b>	<b>293</b>	<b>16</b>	<b>16</b>	Accrued expenses and deferred income	4.338	346	3.665
<b>Current receivables</b>				<b>Total</b>	<b>15.355</b>	<b>2.587</b>	<b>7.863</b>
Accounts receivable	728	178	127	<b>TOTAL EQUITY AND LIABILITIES</b>	<b>41.607</b>	<b>14.741</b>	<b>12.000</b>
Accrued non-invoiced revenue	2,800	1.231	1.260				
Other short-term receivables	830	550	760				
Prepaid expenses and accrued income	85	60	348				
<b>Total</b>	<b>4.443</b>	<b>2.019</b>	<b>2.495</b>				
<b>Cash and cash equivalents</b>							
Cash and cash equivalents	29.401	12.294	9.116				
<b>Total</b>	<b>29.401</b>	<b>12.294</b>	<b>9.116</b>				
<b>Total current assets</b>	<b>34.137</b>	<b>14.329</b>	<b>11.627</b>				
<b>Total assets</b>	<b>41.607</b>	<b>14.741</b>	<b>12.000</b>				

**Consolidated Cash-Flow-Statement**

Amounts in TSEK	01.01.2020	01.01.2019
	31.03.2020	31.12.2019
<b>Operating activities</b>		
Profit/loss after financial items	-1.285	-8.929
Adjustments for items not included in cash flow	125	-38
	0	0
<b>Cash flow from operating activities before change in working capital</b>	<b>-1.160</b>	<b>-8.967</b>
<b>Cash flow from change in working capital</b>		
Change in inventories	0	0
Change in operating receivables	-984	-550
Change in operating liabilities	-623	4.348
<b>Cash flow from continuing operations before changes in working capital</b>	<b>-1.607</b>	<b>3.798</b>
<b>Chash flow from operating activities</b>	<b>-2.767</b>	<b>-5.169</b>
<b>Investing activities</b>		
Investments in intangible assets	0	0
Investments in tangible fixed assets	-21	-231
Divestments of intangible assets	0	0
Acquisition of financial assets	0	0
Disposal of intangible assets	0	0
<b>Cash flow from investing activities</b>	<b>-21</b>	<b>-231</b>
<b>Financing activities</b>		
Deposit share capital	0	0
New share issue	0	0
New share issue in progress	24.681	0
Issue expenses	-1608	-138
Shareholder's contribution	0	0
<b>Cash flow from financing activities</b>	<b>23.073</b>	<b>-138</b>
<b>Cash flow for the year</b>	<b>20.285</b>	<b>-5.538</b>
<b>Cash and cash equivalents begin of period</b>	<b>9.116</b>	<b>14.654</b>
<b>Cash and equvalents end of period</b>	<b>29.401</b>	<b>9.116</b>

## 8 News after the Reporting Period

**Industrial Solar and Kyotherm jointly offer Solar Process Heat solutions without capital investments for end users**



Besides optimal technology for solar process heating solutions, our clients also require suitable financing packages. To meet the later, Industrial Solar has signed a Memorandum of Understanding with Kyotherm to jointly offer industrial companies solar process heat as a service - without capital investment requirements for the end users.

Kyotherm is an investment company that specializes in the third-party financing of renewable heat production projects and energy efficiency projects. Kyotherm partners with the sector's project developers (engineering companies, EPC contractors etc.) and finances their projects with an optimized capital cost. Thus, Kyotherm is the ideal financing partner for Industrial Solar as they have a key focus on thermal projects, international experience and committed investors.

The companies already started to develop joint projects and expect a strong growth in the coming years.

## 9 Updated Reporting Dates 2020

Reporting Dates	
4 <sup>th</sup> Quarterly Report 2019	19 February 2020
Annual Report	19 May 2020
1. Quarterly Report	29 May 2020
Annual Shareholder Meeting Härnösand	15 June 2020
2. Quarterly Report	28 August 2020
3. Quarterly Report	27 November 2020
4. Quarterly Report	26 February 2021

## 10 Statement from the Board and Management

The Board of Directors and the Executive Board have today considered and approved the Quarterly Report of Industrial Solar Holding Europe AB for the period from 01.01.2020 - 31.03.2020. The quarterly report is presented in accordance with the Swedish K3 accounting standards. In our opinion, the financial statements give a true and fair view of the entity's financial position and of the results of its operations and cash flows at 31.03.2020.

We believe that the management commentary contains a fair review of the affairs and conditions referred to therein.

Härnösand, Mai 26<sup>th</sup> 2020



Joakim Byström  
Chairman  
Of the Board

Christian Zahler  
CEO and  
Board Member

Tobias Schwind  
CFO  
Board Member



Olle Olszen  
Board Member

Joao Gomes  
Board Member

Luca Viscuso  
Board Member

## 11 Contact

Industrial Solar Holding Europe AB  
Fiskaregatan 11 SE-871 33 Härnösand / Sweden  
T 0611-55 70 00, F 0611-557210  
Org.nr: 559110-3972, BG: 173-7691  
E-mail: [ir@industrial-solar.se](mailto:ir@industrial-solar.se)  
[www.industrial-solar.se](http://www.industrial-solar.se)

