



## POHJOLAN VOIMA OYJ

### EUR 125,000,000 Senior Fixed Rate Notes due 2023 (ISIN: FI4000327820)

On 8 June 2018 (the “**Issue Date**”), Pohjolan Voima Oyj (the “**Issuer**”) issued EUR 125,000,000 1.750 percent notes due 2023 (the “**Notes**”). The Notes will be redeemed at their nominal principal amount on 8 June 2023 (the “**Maturity Date**”), unless previously redeemed or purchased and cancelled as described in “*Terms and Conditions of the Notes*”.

Each Note bear interest from, and including, 8 June 2018 at the rate of 1.750 percent per annum to, but excluding, the Maturity Date or such earlier date on which the Note is redeemed or purchased and cancelled. Interest will be payable annually in arrears on 8 June commencing on 8 June 2019, as described in “*Terms and Conditions of the Notes—Interest*”.

The Notes constitute direct, unconditional, unsubordinated and unsecured obligations of the Issuer. The Notes were issued in the book-entry securities system of Euroclear Finland Oy (“**Euroclear Finland**”) in dematerialised form under the Finnish Act on Book-Entry System and Clearing Activities (348/2017, as amended). The Notes may be held by holders of the Notes (the “**Noteholders**”) directly through book-entry accounts with Euroclear Finland. The Notes are not evidenced by any physical note or document of title other than statements of account made by Euroclear Finland or its account operator and cannot be physically delivered. The Notes were issued in denominations of EUR 1,000.

Application will be made to have the Notes listed on Nasdaq Helsinki Ltd (“**Nasdaq Helsinki**”). The Notes are not currently rated by any rating agency.

Investment in the Notes involves certain risks. The summary of certain principal risk factors that may affect the ability of the Issuer to fulfil its obligations under the Notes is presented under “*Risk Factors*”. Each investor should carefully review this Listing Prospectus, including the risks involved, prior to making an investment decision.

The Notes have not been, and will not be, registered under the U.S. Securities Act 1933, as amended (the “**Securities Act**”), or the securities laws of any state of the United States, and the Notes may not be offered or sold within the United States or to, or for the account or benefit of, any U.S. person (as such terms are defined in Regulation S under the Securities Act (“**Regulation S**”)), except in certain transactions exempt from, or in a transaction not subject to the registration requirements of, the Securities Act and in accordance with applicable state securities laws. The Notes have been offered and sold in offshore transactions outside the United States in reliance on Regulation S.

### Lead Managers



Handelsbanken

The date of this Listing Prospectus is 8 May 2019.

## IMPORTANT INFORMATION

In this Listing Prospectus, any reference to the “**Issuer**” means Pohjolan Voima Oyj, the “**PVO Group**” means the Issuer and its subsidiaries on a consolidated basis, and “**PVO**” means the PVO Group and the Issuer’s associated companies and joint ventures, except where the context may otherwise require or except where otherwise expressly stated. The associated companies and joint ventures of PVO have been accounted for using the equity method of accounting. For additional information, see Notes 1 and 19 to the Issuer’s audited consolidated financial statements as of and for the year ended 31 December 2018 incorporated by reference into this Listing Prospectus. In this Listing Prospectus, the Issuer has provided more detailed information on Teollisuuden Voima Oyj (“**TVO**”) inasmuch as the Issuer considers TVO to be a material joint venture. For additional information on TVO, see “*Risk Factors—Risks Related to Nuclear Operations of TVO*” and “*Information about TVO*”. OP Corporate Bank plc and Svenska Handelsbanken AB (publ) acted as lead managers (the “**Lead Managers**”) in relation to the offering and issue of the Notes.

This document (this listing prospectus and the documents incorporated by reference herein are jointly referred to as the “**Listing Prospectus**”) has been prepared in accordance with the Finnish Securities Market Act (746/2012, as amended, the “**Finnish Securities Market Act**”), the Finnish Ministry of Finance Decree on prospectuses referred to in Chapters 3 to 5 of the Finnish Securities Market Act (1019/2012), the Commission Regulation (EC) No. 809/2004 of April 29, 2004, as amended, (Annexes IV, V and XXII) implementing Directive 2003/71/EC of the European Parliament and of the Council as regards information contained in prospectuses as well as the format, incorporation by reference and publication of such prospectuses and dissemination of advertisements and the regulations and guidelines issued by the Finnish Financial Supervisory Authority (the “**FIN-FSA**”) solely for the purpose of listing the Notes on Nasdaq Helsinki. The FIN-FSA has approved this Listing Prospectus, but assumes no responsibility for the correctness of the information contained herein. The registration number of the FIN-FSA’s approval decision is FIVA 19/02.05.04/2019. This Listing Prospectus has been prepared in English only. However, the summary of this Listing Prospectus has been translated into Finnish. The Issuer is responsible for the correctness of the Finnish translation of the summary.

This Listing Prospectus should be read together with all documents which are incorporated herein by reference. This Listing Prospectus shall be read and construed on the basis that such documents are incorporated and form part of this Listing Prospectus. See “*Documents Incorporated by Reference*”.

**MIFID II PRODUCT GOVERNANCE / PROFESSIONAL INVESTORS, ECPS AND RETAIL INVESTORS TARGET MARKET** – Solely for the purposes of each manufacturer’s product approval process, the target market assessment in respect of the Notes has led to the conclusion that: (i) the target market for the Notes is eligible counterparties, professional clients and retail investors, each as defined in Directive 2014/65/EU (as amended, “**MiFID II**”); and (ii) all channels for distribution of the Notes are appropriate. Any person subsequently offering, selling or recommending the Notes (a “distributor”) should take into consideration the manufacturers’ target market assessment; however, a distributor subject to MiFID II is responsible for undertaking its own target market assessment in respect of the Notes (by either adopting or refining the manufacturers’ target market assessment) and determining appropriate distribution channels.

### **Important – EEA Retail Investors**

The Notes have a fixed rate of interest and the redemption amount is fixed as described in this Listing Prospectus. Accordingly, no key information document pursuant to Regulation (EU) No. 1286/2014 (the “**PRIIPs Regulation**”) has been prepared by the Issuer. The Lead Managers are acting exclusively for the Issuer as the lead managers in connection with the listing of the Notes and will not be responsible to anyone other than the Issuer for providing the protections afforded to its clients nor giving investment or other advice in relation to the Notes. Neither the Issuer nor the Lead Managers have taken any action, nor will they take any action to make a public offer of the Notes in their possession, or the distribution of this Listing Prospectus or any other documents relating to the Notes admissible in any jurisdiction requiring special measures to be taken for the purpose of making a public offer. Any investor investing in the Notes becomes bound by the final terms and conditions for the Notes. The Notes have not been, and will not be, registered under the Securities Act or the securities laws of any state of the United States and the Notes may not be offered or sold within the United States or to, or for the account or benefit of, any U.S. person (as such terms are defined in Regulation S), except in certain transactions exempt from, or in a transaction not subject to the registration requirements of, the Securities Act and in accordance with applicable state securities laws.

The distribution of the Listing Prospectus and the offer and sale of the Notes in certain jurisdictions may be restricted by law. Persons into whose possession this Listing Prospectus comes are instructed by the Issuer and the Lead Managers to inform themselves about and to observe any such restrictions. This Listing Prospectus may not be distributed in the United States, Australia, Canada, Hong Kong, Japan or Singapore, or such other countries or otherwise in such circumstances in which the offering of the Notes would be unlawful or require measures other than those required under the laws of Finland. This Listing Prospectus does not constitute an offer of, or an invitation to purchase, the Notes in any jurisdiction. No offer will be made to persons whose participation in the offering requires any additional Listing Prospectus or registration. None of the Issuer, the Lead Managers or any of their respective affiliates or representatives accepts any legal responsibility for any such violations by any person or entity, whether or not a prospective purchaser of Notes, and whether or not the person or entity is aware of such restrictions.

Prospective investors should rely solely on the information contained in this Listing Prospectus. No person has been authorised to give any information or to make any representation not contained in or not consistent with this Listing Prospectus or any information supplied by the Issuer or such other information as is in the public domain and, if given or made, such information or representation should not be relied upon as having been authorised by the Issuer. In making an investment decision, each investor must rely on their examination, analysis and enquiry of the Issuer and the terms of the Notes, including the risks and merits involved. Neither the Issuer, nor the Lead Managers nor any of their respective affiliated parties or representatives, is making any representation to any offeree or subscriber of the Notes regarding the legality of the investment by such person. Investors are required to make their independent assessment of the legal, tax, business, financial and other consequences of an investment in the Notes. The contents of this Listing Prospectus are not to be construed as legal, business, tax, financial or other advice.

The Lead Managers assume no responsibility for the accuracy or completeness of the information herein and, accordingly, no representation or warranty, express or implied, is made by the Lead Managers as to the accuracy or completeness of the information contained in this Listing Prospectus, and nothing contained in this Listing Prospectus is, or shall be relied upon as a promise or representation by the Lead Managers in this respect, whether as to the past or the future. Apart from the responsibilities and liabilities, if any, which may be imposed on the Lead Managers by Finnish law or under the regulatory regime of any other jurisdiction where exclusion of liability under Finnish law or the relevant regulatory regime of the other jurisdiction would be illegal, void or unenforceable, the Lead Managers do not accept any responsibility whatsoever for the contents of this Listing Prospectus or for any statement made or purported to be made by them, or on their behalf, in connection with the Issuer or the Notes. The Lead Managers accordingly disclaim to the fullest extent permitted by applicable law any and all liability whether arising in tort, contract, or otherwise (save as referred to above) which they may otherwise have in respect of such document or any such statement.

The information contained herein is current as of the date of this Listing Prospectus. The delivery of this Listing Prospectus, and the offer, sale or delivery of the Notes shall not mean that no adverse changes or events have occurred after the date of this Listing Prospectus, which could result in a material adverse effect on PVO’s business, financial position, and future prospects and, thereby, on the Issuer’s ability to fulfil its obligations under the Notes as well as on the value of the Notes. Nothing contained in this Listing Prospectus is, or shall be relied upon as, a promise or representation by the Issuer or the Lead Managers as to the future.

The Notes are governed by and construed in accordance with the laws of Finland. Any dispute arising in relation to the Notes shall be settled exclusively by Finnish courts in accordance with Finnish law. The auditor of the Issuer has audited the Finnish language versions of the financial statements that shall prevail. English language versions of the financial statements are unofficial translations thereof.

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## SUMMARY

Summaries are made up of disclosure requirements known as “Elements”. These Elements are numbered in Sections A–E (A.1–E.7).

This summary contains all the Elements required to be included in the summary for this type of securities and the issuer. Because some Elements are not required to be addressed, there may be gaps in the numbering sequence of the Elements.

Even though an Element may be required to be inserted in the summary because of the type of securities and the issuer, it is possible that no relevant information can be given regarding the Element. In this case, a short description of the Element is included in the summary with the mention of “not applicable”.

### Section A – Introduction and warnings

<b>Element</b>	<b>Disclosure requirement</b>	<b>Disclosure</b>
A.1	Introduction	<i>This summary should be read as an introduction to this Listing Prospectus. Any decision to invest in the Notes should be based on a consideration of this Listing Prospectus as a whole by prospective investors. Where a claim relating to the information contained in this Listing Prospectus is brought before a court, the plaintiff investor might, under the national legislation of the member states, have to bear the costs of translating this Listing Prospectus before the legal proceedings are initiated. Civil liability attaches only to those persons who have tabled this summary including any translation thereof, but only if this summary is misleading, inaccurate or inconsistent when read together with the other parts of this Listing Prospectus or if it does not provide, when read together with the other parts of this Listing Prospectus, key information in order to aid investors when considering whether to invest in the Notes.</i>
A.2	Consent for subsequent resale or final placement of securities/offer period/conditions of the consent	Not applicable.

### Section B – Issuer

<b>Element</b>	<b>Disclosure requirement</b>	<b>Disclosure</b>
B.1	Legal and commercial name	Pohjolan Voima Oyj.
B.2	Domicile/legal form/legislation/ country of incorporation	The Issuer is domiciled in Helsinki. The Issuer is a public limited liability company incorporated in Finland and organized under the laws of Finland.
B.4b	Known trends of the issuer and its industry	The Issuer operates on a cost-price principle as described in Article 4 of the Issuer’s Articles of Association. On long-term basis, the Issuer aims to provide stable and cost-efficient energy to its shareholders. Curbing climate change by reducing greenhouse gas emissions increases the production of weather-dependent renewable energy (e.g., wind and solar power), which also increases the importance of flexible energy systems and adaptive production in the future.

## Section B – Issuer

Element	Disclosure requirement	Disclosure																																																																																												
B.5	Group structure	<p>The Issuer is the ultimate parent company of the PVO Group. The following table sets forth all of the Issuer’s subsidiaries, associated companies and joint ventures together with the Issuer’s ownership in such companies as of the date of this Listing Prospectus:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 60%;"></th> <th style="width: 20%; text-align: center;">Production</th> <th style="width: 10%; text-align: center;">The Issuer’s ownership (percent)</th> <th style="width: 10%; text-align: center;">The Issuer’s share series entitling to energy<sup>(1)</sup></th> </tr> </thead> <tbody> <tr> <td colspan="4"><b>Parent company and subsidiaries</b></td> </tr> <tr> <td>Pohjolan Voima Oyj.....</td> <td>Parent</td> <td></td> <td></td> </tr> <tr> <td>PVO-Vesivoima Oy .....</td> <td>Hydropower</td> <td>100</td> <td>A</td> </tr> <tr> <td>Hämeenkyrön Voima Oy .....</td> <td>Thermal Power (CHP)</td> <td>84</td> <td>G10</td> </tr> <tr> <td>Kaukaan Voima Oy.....</td> <td>Thermal Power (CHP)</td> <td>54</td> <td>G9</td> </tr> <tr> <td>Kymin Voima Oy .....</td> <td>Thermal Power (CHP)</td> <td>76</td> <td>G2</td> </tr> <tr> <td>Laanilan Voima Oy .....</td> <td>Thermal Power (CHP)</td> <td>100</td> <td>G5</td> </tr> <tr> <td>Porin Prosessivoima Oy .....</td> <td>Thermal Power (CHP)</td> <td>100</td> <td>G6</td> </tr> <tr> <td>PVO-Lämpövoima Oy<sup>(2)</sup>.....</td> <td>Thermal Power</td> <td>100</td> <td>C</td> </tr> <tr> <td>Rauman Biovoima Oy.....</td> <td>Thermal Power (CHP)</td> <td>72</td> <td>G4</td> </tr> <tr> <td>PVO Power Management Oy.....</td> <td>Services company</td> <td>100</td> <td>–</td> </tr> <tr> <td>PVO Power Services Oy.....</td> <td>Services company</td> <td>100</td> <td>–</td> </tr> <tr> <td>Rouhialan Voimansiirto Oy .....</td> <td>Services company</td> <td>100</td> <td>–</td> </tr> <tr> <td colspan="4"><b>Associated companies</b></td> </tr> <tr> <td>Oy Alholmens Kraft Ab.....</td> <td>Thermal Power (CHP)</td> <td>49.9</td> <td>G</td> </tr> <tr> <td>Länsi-Suomen Voima Oy.....</td> <td>Hydropower</td> <td>19.9<sup>(3)</sup></td> <td>A</td> </tr> <tr> <td>Tornionlaakson Voima Oy.....</td> <td>Hydropower</td> <td>50<sup>(3)</sup></td> <td>A</td> </tr> <tr> <td>Tahkoluodon Polttoöljy Oy.....</td> <td>Dormant</td> <td>32</td> <td>–</td> </tr> <tr> <td colspan="4"><b>Joint Ventures</b></td> </tr> <tr> <td>Teollisuuden Voima Oyj<sup>(4)</sup>.....</td> <td>Nuclear Power</td> <td>57.1</td> <td>B (OL1 &amp; OL2), B2 (OL3)</td> </tr> <tr> <td>Vaskiluodon Voima Oy<sup>(5)</sup>.....</td> <td>Thermal Power (CHP)</td> <td>50</td> <td>V</td> </tr> <tr> <td>Voimalohi Oy.....</td> <td>Services company</td> <td>50</td> <td>–</td> </tr> </tbody> </table> <p>(1) In addition to those listed below, the Issuer has M share series that related to Mussalon Voima Oy, 100 percent subsidiary of the Issuer that was liquidated in 2017 and C2 share series that relate to Meri-Pori coal-fired power plant through the shares in the C-series of TVO. On 31 December 2018, PVO sold all C-shares of TVO entitling to the power production of the Meri-Pori coal-fired power plant.</p> <p>(2) PVO-Lämpövoima Oy’s production operations ceased in 2015.</p> <p>(3) Through PVO-Vesivoima Oy.</p> <p>(4) Based on the Articles of Association and the shareholders’ agreement of TVO, which form the basis for the decision-making and governance of TVO, as well as the Issuer’s right to appoint board members of TVO, the Issuer has assessed that TVO is a joint venture.</p> <p>(5) On 4 April 2019, PVO agreed on an arrangement with EPV Energy Ltd to transfer all assets and business operations of Vaskiluodon Voima Oy to EPV Energy Ltd. The ownership of the assets will transfer on 1 January 2023.</p>		Production	The Issuer’s ownership (percent)	The Issuer’s share series entitling to energy <sup>(1)</sup>	<b>Parent company and subsidiaries</b>				Pohjolan Voima Oyj.....	Parent			PVO-Vesivoima Oy .....	Hydropower	100	A	Hämeenkyrön Voima Oy .....	Thermal Power (CHP)	84	G10	Kaukaan Voima Oy.....	Thermal Power (CHP)	54	G9	Kymin Voima Oy .....	Thermal Power (CHP)	76	G2	Laanilan Voima Oy .....	Thermal Power (CHP)	100	G5	Porin Prosessivoima Oy .....	Thermal Power (CHP)	100	G6	PVO-Lämpövoima Oy <sup>(2)</sup> .....	Thermal Power	100	C	Rauman Biovoima Oy.....	Thermal Power (CHP)	72	G4	PVO Power Management Oy.....	Services company	100	–	PVO Power Services Oy.....	Services company	100	–	Rouhialan Voimansiirto Oy .....	Services company	100	–	<b>Associated companies</b>				Oy Alholmens Kraft Ab.....	Thermal Power (CHP)	49.9	G	Länsi-Suomen Voima Oy.....	Hydropower	19.9 <sup>(3)</sup>	A	Tornionlaakson Voima Oy.....	Hydropower	50 <sup>(3)</sup>	A	Tahkoluodon Polttoöljy Oy.....	Dormant	32	–	<b>Joint Ventures</b>				Teollisuuden Voima Oyj <sup>(4)</sup> .....	Nuclear Power	57.1	B (OL1 & OL2), B2 (OL3)	Vaskiluodon Voima Oy <sup>(5)</sup> .....	Thermal Power (CHP)	50	V	Voimalohi Oy.....	Services company	50	–
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B.9	Profit forecast	Not applicable. The Issuer has not given any profit forecast.																																																																																												
B.10	Nature of any qualifications in the audit report on the historical financial information	Not applicable. There are no qualifications in the audit reports on the historical financial information.																																																																																												

**Section B – Issuer**

<b>Element</b>	<b>Disclosure requirement</b>	<b>Disclosure</b>
B.12	Selected historical key financial information	<p>The following tables set forth selected consolidated financial and other information for the Issuer as of and for the years ended December 31, 2018 and 2017. The selected consolidated financial information set forth below has been derived from the Issuer’s audited consolidated financial statements as of and for the financial years ended 31 December 2018 and 31 December 2017.</p> <p>The Issuer’s consolidated financial information has been prepared in accordance with the International Financial Reporting Standards (“IFRS”) as adopted by the EU.</p>

		<b>For the year ended 31 December</b>	
		<b>2018</b>	<b>2017</b>
		<b>(audited)</b>	
		<b>(EUR in thousands)</b>	
<b>CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME</b>			
<b>Continuing operations</b>			
<b>Sales</b> .....		514,096	453,603
Other operating income.....		2,968	21,968
Materials and services.....		(402,536)	(352,573)
Personnel expenses .....		(9,959)	(10,511)
Depreciation, amortisation and impairment .....		(39,048)	(39,484)
Other operating expenses.....		(53,437)	(52,016)
Share of (loss)/profit of associates and joint ventures.....		(19,535)	(9,424)
<b>Operating profit or loss</b> .....		<b>(7,451)</b>	<b>11,563</b>
Finance income.....		2,728	4,329
Finance costs.....		(27,637)	(14,063)
<b>Finance costs – net</b> .....		<b>(24,909)</b>	<b>(9,734)</b>
<b>Profit before income tax</b> .....		<b>(32,360)</b>	<b>1,829</b>
Income tax expense.....		0	838
<b>Profit for the period from continuing operations</b> .....		<b>(32,360)</b>	<b>2,667</b>
<b>Discontinued operations</b>			
<b>Profit/loss from discontinued operations</b> .....		<b>2,611</b>	<b>(1,570)</b>
<b>Profit for the period</b> .....		<b>(29,749)</b>	<b>1,097</b>
<b>Other comprehensive income:</b>			
Items, that may be reclassified later to profit or loss			
Share of other comprehensive income of associates .....			(8)
Changes in the fair value of available-for-sale financial assets.....		0	
Cash flow hedging .....		4,166	(5,369)
Other comprehensive income for the period .....		4,166	(5,377)
<b>Total comprehensive income for the period</b> .....		<b>(25,583)</b>	<b>(4,280)</b>
<b>Profit attributable to:</b>			
Owners of the parent.....		(29,098)	(10,392)
Non-controlling interest.....		(651)	11,489
<b>Profit for the period</b> .....		<b>(29,749)</b>	<b>1,097</b>
<b>Total comprehensive income attributable to:</b>			
Owners of the parent.....		(24,932)	(15,769)
Non-controlling interest.....		(651)	11,489
<b>Total comprehensive income for the period</b> .....		<b>(25,583)</b>	<b>(4,280)</b>

Section B – Issuer

	As of 31 December	
	2018	2017
	(audited)	
	(EUR in thousands)	
<b>CONSOLIDATED BALANCE SHEET</b>		
<b>ASSETS</b>		
<b>Non-current assets</b>		
Intangible assets.....	284,173	283,364
Property, plant and equipment.....	497,440	531,077
Investments in associated companies and joint ventures.....	714,625	744,184
Available-for-sale financial assets.....	486	505
Loans and other receivables.....	<u>446,034</u>	<u>385,962</u>
<b>Non-current assets total.....</b>	<b><u>1,942,758</u></b>	<b><u>1,945,092</u></b>
<b>Current assets</b>		
Inventories.....	12,038	5,190
Trade and other receivables.....	84,399	86,452
Cash and cash equivalents.....	<u>59,598</u>	<u>43,857</u>
<b>Current assets total.....</b>	<b><u>156,035</u></b>	<b><u>135,499</u></b>
Assets held for sale.....	<u>4,653</u>	<u>8,845</u>
<b>Total assets.....</b>	<b><u>2,103,446</u></b>	<b><u>2,089,436</u></b>
<b>EQUITY</b>		
<b>Equity attributable to owners of the parent</b>		
Share capital.....	65,293	65,293
Share premium.....	216,822	216,822
Reserve for invested non-restricted equity.....	326,683	328,869
Revaluation reserve.....	1,700	(2,466)
Retained earnings.....	<u>165,879</u>	<u>192,792</u>
<b>Equity attributable to owners of the parent, total.....</b>	<b><u>776,377</u></b>	<b><u>801,310</u></b>
<b>Non-controlling interests.....</b>	<b><u>40,515</u></b>	<b><u>42,197</u></b>
<b>Total equity.....</b>	<b><u>816,892</u></b>	<b><u>843,507</u></b>
<b>LIABILITIES</b>		
<b>Non-current liabilities</b>		
Provisions.....	3,345	4,491
Deferred tax liabilities.....	0	0
Borrowings.....	1,107,672	1,040,611
Other non-current liabilities.....	<u>6,293</u>	<u>2,993</u>
<b>Non-current liabilities total.....</b>	<b><u>1,117,310</u></b>	<b><u>1,048,095</u></b>
<b>Current liabilities</b>		
Borrowings.....	114,533	140,126
Trade and other payables.....	<u>54,711</u>	<u>57,708</u>
<b>Current liabilities total.....</b>	<b><u>169,244</u></b>	<b><u>197,834</u></b>
Liabilities related to assets held for sale.....	<u>0</u>	<u>0</u>
<b>Total liabilities.....</b>	<b><u>1,286,554</u></b>	<b><u>1,245,929</u></b>
<b>Total equity and liabilities.....</b>	<b><u>2,103,446</u></b>	<b><u>2,089,436</u></b>

Section B – Issuer

	As of and for the year ended 31 December	
	2018	2017
	(audited)	
	(EUR in thousands)	
<b>CONSOLIDATED CASH FLOW STATEMENT</b>		
<b>Cash flows from operating activities</b>		
Profit for the period.....	(32,360)	2,667
Adjustments to the profit for the period.....	83,058	42,563
Change in net working capital.....	(8,949)	(447)
Interest paid and other financial expenses.....	(12,651)	(14,768)
Interest received.....	2,584	2,278
Income tax paid.....	(4)	36
<b>Net cash generated from operating activities.....</b>	<b>31,678</b>	<b>32,329</b>
<b>Cash flows from investing activities</b>		
Proceeds from sales of shares in participating interests.....	2	0
Purchases of intangible assets and property, plant and equipment (PPE).....	(5,538)	(6,458)
Proceeds from sales of intangible assets and PPE.....	265	6,738
Proceeds from sales of available-for-sale financial assets.....	15	0
Proceeds from sales of subsidiaries.....	0	16,685
Equity refunds received.....	3,310	0
Loan repayments.....	0	2,264
Loans granted.....	(60,232)	(60,231)
Proceeds (+) or repayments (-) of short-term investments.....	0	0
Dividends received.....	7	8
<b>Net cash used in investing activities.....</b>	<b>(62,171)</b>	<b>(40,994)</b>
<b>Cash flows from financing activities</b>		
Proceeds from issuance of ordinary shares.....	0	49,305
Acquisition of own shares.....	0	(296)
Proceeds from borrowings.....	125,000	510,000
Repayments of borrowings.....	(44,854)	(538,493)
Repayments of finance leases.....	(13,791)	(13,649)
Proceeds (+) or repayments (-) of current liabilities.....	(24,889)	(27)
Dividends paid.....	(311)	(15,304)
<b>Net cash used in financing activities.....</b>	<b>41,155</b>	<b>(8,464)</b>
<b>Net increase (decrease) in cash and cash equivalents.....</b>	<b>10,662</b>	<b>(17,129)</b>
<b>Cash and cash equivalents at beginning of year.....</b>	<b>33,885</b>	<b>52,866</b>
Change in cash and cash equivalents.....	10,662	(17,129)
Cash and cash equivalents of subsidiaries sold.....	–	(1,852)
<b>Cash and cash equivalents at end of period, continuing operations.....</b>	<b>44,547</b>	<b>33,885</b>
<b>Cash and cash equivalents, discontinued operations.....</b>	<b>15,051</b>	<b>9,972</b>
<b>Cash and cash equivalents at end of year.....</b>	<b>59,598</b>	<b>43,857</b>



**Section B – Issuer**

<b>Element</b>	<b>Disclosure requirement</b>	<b>Disclosure</b>
B.13	Recent events relevant to the evaluation of the Issuer's solvency	Not applicable. There are no recent events particular to the Issuer, which are to a material extent relevant to the evaluation of the Issuer's solvency
B.14	Dependence upon other entities within the group	The operations of the PVO Group are primarily conducted through subsidiaries, associated companies and joint ventures of the Issuer. The Issuer is the ultimate parent company of the PVO Group.
B.15	Principal activities	The Issuer's principal object, as set out in its Articles of Association, is procurement of energy at cost price to its shareholders who consist mainly of Finnish industrial as well as private and municipal energy companies. The Issuer's focus is on hydropower, thermal power and nuclear power.
B.16	Controlling interests	Not applicable. To the extent known to the Issuer, the Issuer is not directly or indirectly owned or controlled by any person.
B.17	Credit ratings	Not applicable. No credit ratings have been assigned to the Issuer or its debt securities.

**Section C – Securities**

<b>Element</b>	<b>Disclosure requirement</b>	<b>Disclosure</b>
C.1	Type and class of the securities being admitted to trading	Senior unsecured notes with the principal amount of EUR 125,000,000. The principal amount of each book-entry unit is EUR 1,000. The ISIN code of the Notes is FI4000327820.
C.2	Currency of the securities issue	Euro.
C.5	Restrictions on the free transferability of the securities	Each Note will be freely transferable after it has been registered into the respective book-entry account.
C.8	Rights attached to securities/ranking	The Notes constitute direct, unconditional, unsubordinated, unguaranteed and unsecured obligations of the Issuer ranking <i>pari passu</i> among themselves and at least <i>pari passu</i> with all other present and future unsecured and unsubordinated obligations of the Issuer, save for such obligations as may be preferred by mandatory provisions of law.
C.9	Interest/repayment/yield	<p>The Notes bear interest from, and including, 8 June 2018 at the rate of 1.750 percent per annum to, but excluding, 8 June 2023 the Maturity Date. Interest will be payable annually in arrears on each 8 June commencing on 8 June 2019.</p> <p>The Notes shall be repaid in full at their principal amount on the Maturity Date, unless the Issuer has redeemed the Notes or prepaid the Notes.</p> <p>As of the Issue Date, the effective yield of the Notes at the issue price of 99.357 percent was 1.886 percent per annum.</p> <p>The Issuer has the right to redeem the Notes, in whole but not in part, at any time from and including the first Business Day (as defined in the terms and conditions of the Notes (the “<b>Terms and Conditions</b>”)) falling three (3) months prior to the Maturity Date.</p> <p>The holders of the Notes are represented by a meeting of the Noteholders (the “<b>Noteholders’ meeting</b>”) or the procedure in writing.</p>
C.10	Derivative component	Not applicable. The Notes have no derivative component in the interest payment.
C.11	Admission to trading	Application will be made to have the Notes listed on Nasdaq Helsinki.

**Section D – Risks**

<b>Element</b>	<b>Disclosure requirement</b>	<b>Disclosure</b>
D.2	Key risks that are specific to the issuer	<p><b>Risks related to PVO’s operations include, but are not limited to the following:</b></p> <ul style="list-style-type: none"> <li>• The energy production industry is highly regulated and various laws and regulations affecting the industry are subject to change;</li> <li>• Changes to the regulatory framework governing PVO’s hydro and thermal operations could adversely affect PVO;</li> <li>• Dam failure could adversely affect PVO’s hydro operations;</li> <li>• The Issuer has a liability in relation to TVO’s nuclear waste management;</li> <li>• Major adverse events or circumstances may affect PVO’s operations; and</li> <li>• Governmental, legal or arbitration proceedings or claims could have a material adverse effect on PVO.</li> </ul> <p><b>Risks related to nuclear operations of TVO include, but are not limited to the following:</b></p> <ul style="list-style-type: none"> <li>• There can be no assurance that safety and stability of TVO’s nuclear operations will continue;</li> <li>• Disposal of nuclear waste includes risks;</li> <li>• A failure by TVO to comply with applicable regulations could result in interruption of its operations and have a material adverse effect on its business and financial position;</li> <li>• There are political risks relating to TVO’s business operations;</li> <li>• No assurance can be given that developments in the demand and supply for nuclear fuel and related services will not result in procurement problems for TVO; and</li> <li>• There are several risks related to the Olkiluoto 3 EPR project.</li> </ul> <p><b>Risks related to PVO’s financing include, but are not limited to the following:</b></p> <ul style="list-style-type: none"> <li>• PVO is exposed to financing, refinancing and liquidity risk;</li> <li>• PVO is exposed to interest rate risks;</li> <li>• PVO is exposed to counterparty and credit risk through its financing activities; and</li> <li>• The Issuer’s financial position is materially dependent on its shareholders making timely payments to the Issuer.</li> </ul>
D.3	Key risks that are specific to the securities	<p><b>Risks related to the Notes include, but are not limited to the following:</b></p> <ul style="list-style-type: none"> <li>• The Notes may not be a suitable investment for all investors;</li> <li>• The Issuer’s ability to make payments under the Notes is effectively subordinated to any liabilities of its subsidiaries, associates and joint ventures;</li> <li>• Neither the Issuer nor the Notes are rated;</li> </ul>

## Section D – Risks

<b>Element</b>	<b>Disclosure requirement</b>	<b>Disclosure</b>
		<ul style="list-style-type: none"><li>• Investors are exposed to credit risk in respect of the Issuer and investors may lose their investment in the Notes;</li><li>• Since the Notes bear a fixed interest rate, their price may fall as a result of changes in the interest rates;</li><li>• The Notes carry no voting rights at the Issuer’s General Meetings of Shareholders;</li><li>• The Notes constitute unsecured obligations of the Issuer;</li><li>• The Issuer using its right or being obligated to redeem and purchase the Notes prior to maturity may have an adverse effect on the Issuer and on any Notes outstanding;</li><li>• The Issuer is not obliged to compensate for withholding tax or similar on the Notes;</li><li>• The completion of transactions relating to the Notes is dependent on Euroclear Finland’s operations and systems;</li><li>• Legislative amendments may take place during the term of the Notes;</li><li>• The Issuer may be able to merge, demerge, effect asset sales or otherwise effect significant transactions that may have a material adverse effect on the Notes and the Noteholders;</li><li>• The Issuer may issue additional debt and/or grant security;</li><li>• The Notes contain no covenants on the Issuer’s financial standing or operations;</li><li>• Amendments to the Terms and Conditions bind all Noteholders;</li><li>• Legal investment considerations may restrict certain investments;</li><li>• The right to receive payments under the Notes is subject to time limitations; and</li><li>• There is currently no public market for the Notes and if an active trading market for the Notes does not develop or is not maintained, it could have a material adverse effect on the market price of the Notes.</li></ul>

## Section E – Offer

Element	Disclosure requirement	Disclosure
E.2b	Reasons for the offer/use of proceeds	Proceeds from the issue of the Notes have been used for general corporate purposes, including investments and refinancing certain existing indebtedness.
E.3	Terms and conditions of the offer	<p>Principal amount: EUR 125,000,000.</p> <p>Form of the Notes: Book-entries of Euroclear Finland (Infinity system).</p> <p>Interest: 1.750 percent per annum.</p> <p>Effective yield of the Notes on the Issue Date: At the issue price of 99.357 percent, 1.886 percent per annum.</p> <p>Interest payment dates: Annually in arrears commencing on 8 June 2019 and thereafter on each 8 June until the Maturity Date.</p> <p>Issue Date: 8 June 2018.</p> <p>Maturity Date: 8 June 2023.</p> <p>Redemption: On the Maturity Date.</p> <p>Early redemption (Issuer call option): three (3) months prior to the Maturity Date.</p> <p>Covenants: Change of control, cross default, negative pledge and excess secured indebtedness.</p> <p>Issue price: 99.357 percent.</p> <p>Minimum subscription amount: EUR 100,000.</p> <p>Principal amount of each book-entry unit: EUR 1,000.</p> <p>Governing law: Finnish.</p>
E.4	Interests material to the issue/conflicting interests	Interest of the Lead Managers: Business interest customary in the financial markets.
E.7	Estimated expenses charged to the investor	No expenses will be charged to the investor by the Issuer in respect of the Notes.

## TIIVISTELMÄ

Tiivistelmät koostuvat sääntelyn edellyttämistä tiedoista, joita kutsutaan nimellä ”osatekijät”. Nämä osatekijät on numeroitu jaksoittain A–E (A.1–E.7).

Tämä tiivistelmä sisältää kaikki ne osatekijät, jotka kyseessä olevasta arvopaperista ja sen liikkeeseenlaskijasta tulee esittää. Osatekijöiden numerointi ei välttämättä ole juokseva, koska kaikkia osatekijöitä ei arvopaperin tai liikkeeseenlaskijan luonteen vuoksi ole esitettävä tässä tiivistelmässä.

Vaikka arvopaperin tai liikkeeseenlaskijan luonne edellyttäisi jonkin osatekijän sisällyttämistä tiivistelmään, on mahdollista, ettei kyseistä osatekijää koskevaa merkityksellistä tietoa ole lainkaan. Tällöin osatekijä on kuvattu lyhyesti ja sen yhteydessä mainitaan ”ei sovellu”.

### Jakso A – Johdanto ja varoitukset

Osatekijä	Tiedonantovelvollisuus	Tiedonanto
A.1	Johdanto	<i>Tätä tiivistelmää on pidettävä tämän Listalleottoesitteen johdantona. Mahdollisten sijoittajien on perustettava Velkakirjoja koskeva sijoituspäätöksensä tähän Listalleottoesitteeseen kokonaisuutena. Jos tuomioistuimessa pannaan vireille tähän Listalleottoesitteeseen sisältyviä tietoja koskeva kanne, kantajana toimiva sijoittaja voi jäsenvaltioiden kansallisen lainsäädännön mukaan joutua ennen oikeudenkäynnin vireillepanoa vastaamaan tämän Listalleottoesitteen käänköskustannuksista. Siviilioikeudellista vastuuta sovelletaan henkilöihin, jotka ovat jättäneet tiivistelmän, sen käänkö mukaan luettuna, mutta vain jos tiivistelmä on harhaanjohtava, epätarkka tai epäjohdonmukainen suhteessa tämän Listalleottoesitteen muihin osiin tai jos siinä ei anneta yhdessä tämän Listalleottoesitteen muiden osien kanssa keskeisiä tietoja sijoittajien auttamiseksi, kun he harkitsevat Velkakirjoihin sijoittamista.</i>
A.2	Suostumus arvopapereiden edelleenmyyntiin ja lopulliseen sijoittamiseen/ tarjousaika/ suostumuksen ehdot	Ei sovellu.

### Jakso B – Liikkeeseenlaskija

Osatekijä	Tiedonantovelvollisuus	Tiedonanto
B.1	Virallinen nimi	Pohjolan Voima Oyj.
B.2	Kotipaikka/ oikeudellinen muoto/ sovellettava laki/ perustamismaa	Liikkeeseenlaskijan kotipaikka on Helsinki. Yhtiö on Suomessa perustettu julkinen osakeyhtiö, johon sovelletaan Suomen lakia.
B.4b	Suuntaukset, jotka vaikuttavat liikkeeseenlaskijaan ja sen toimialaan	Liikkeeseenlaskija toimii omakustannuserusteisesti Liikkeeseenlaskijan yhtiöjärjestyksen 4 artiklan mukaisesti. Liikkeeseenlaskija pyrkii pitkällä aikavälillä tarjoamaan osakkeenomistajilleen energiaa luotettavasti ja kustannustehokkaasti. Ilmastonmuutoksen hillitseminen vähentämällä kasvihuonekaasupäästöjä kasvattaa sääoloista riippuvaisen uusiutuvan energian tuotantoa (kuten tuuli- ja aurinkovoima), mikä myös lisää joustavien energiatäijärjestelmien ja mukautuvien tuotantojärjestelmien tärkeyttä tulevaisuudessa.

## Jakso B – Liikkeeseenlaskija

Osatekijä	Tiedonantovelvollisuus	Tiedonanto																																																																																														
B.5	Konsernirakenne	<p>Liikkeeseenlaskija on PVO-konsernin emoyhtiö. Seuraavassa taulukossa esitetään kaikki Liikkeeseenlaskijan tytäryhtiöt, osakkuusyhtiöt ja yhteisyritykset sekä Liikkeeseenlaskijan omistukset näissä yhtiöissä tämän Listalleottoesitteen päivämääränä:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 60%;"></th> <th style="text-align: center; border-bottom: 1px solid black;">Tuotantomuoto</th> <th style="text-align: center; border-bottom: 1px solid black;">Liikkeeseenlaskijan omistusosuus (prosenttia)</th> <th style="text-align: center; border-bottom: 1px solid black;">Energiaan oikeuttavat osakesarjat<sup>(1)</sup></th> </tr> </thead> <tbody> <tr> <td colspan="4"><b>Emoyhtiö ja tytäryhtiöt</b></td> </tr> <tr> <td>Pohjolan Voima Oyj.....</td> <td>Emoyhtiö</td> <td></td> <td></td> </tr> <tr> <td>PVO-Vesivoima Oy.....</td> <td>Vesivoima</td> <td style="text-align: center;">100</td> <td style="text-align: center;">A</td> </tr> <tr> <td>Hämeenkyrön Voima Oy.....</td> <td>Lämpövoima (CHP)</td> <td style="text-align: center;">84</td> <td style="text-align: center;">G10</td> </tr> <tr> <td>Kaukaan Voima Oy.....</td> <td>Lämpövoima (CHP)</td> <td style="text-align: center;">54</td> <td style="text-align: center;">G9</td> </tr> <tr> <td>Kymin Voima Oy.....</td> <td>Lämpövoima (CHP)</td> <td style="text-align: center;">76</td> <td style="text-align: center;">G2</td> </tr> <tr> <td>Laanilan Voima Oy.....</td> <td>Lämpövoima (CHP)</td> <td style="text-align: center;">100</td> <td style="text-align: center;">G5</td> </tr> <tr> <td>Porin Prosessivoima Oy.....</td> <td>Lämpövoima (CHP)</td> <td style="text-align: center;">100</td> <td style="text-align: center;">G6</td> </tr> <tr> <td>PVO-Lämpövoima Oy<sup>(2)</sup>.....</td> <td>Lämpövoima</td> <td style="text-align: center;">100</td> <td style="text-align: center;">C</td> </tr> <tr> <td>Rauman Biovoima Oy.....</td> <td>Lämpövoima (CHP)</td> <td style="text-align: center;">72</td> <td style="text-align: center;">G4</td> </tr> <tr> <td>PVO Power Management Oy.....</td> <td>Palveluyhtiö</td> <td style="text-align: center;">100</td> <td style="text-align: center;">–</td> </tr> <tr> <td>PVO Power Services Oy.....</td> <td>Palveluyhtiö</td> <td style="text-align: center;">100</td> <td style="text-align: center;">–</td> </tr> <tr> <td>Rouhialan Voimansiirto Oy.....</td> <td>Palveluyhtiö</td> <td style="text-align: center;">100</td> <td style="text-align: center;">–</td> </tr> <tr> <td colspan="4"><b>Osakkuusyhtiöt</b></td> </tr> <tr> <td>Oy Alholmens Kraft Ab.....</td> <td>Lämpövoima (CHP)</td> <td style="text-align: center;">49,9</td> <td style="text-align: center;">G</td> </tr> <tr> <td>Länsi-Suomen Voima Oy.....</td> <td>Vesivoima</td> <td style="text-align: center;">19,9<sup>(3)</sup></td> <td style="text-align: center;">A</td> </tr> <tr> <td>Tornionlaakson Voima Oy.....</td> <td>Vesivoima</td> <td style="text-align: center;">50<sup>(3)</sup></td> <td style="text-align: center;">A</td> </tr> <tr> <td>Tahkoluodon Polttoöljy Oy.....</td> <td>Pöytälaatikkoyhtiö</td> <td style="text-align: center;">32</td> <td style="text-align: center;">–</td> </tr> <tr> <td colspan="4"><b>Yhteisyritykset</b></td> </tr> <tr> <td>Teollisuuden Voima Oyj<sup>(4)</sup>.....</td> <td>Ydinvoima</td> <td style="text-align: center;">57,1</td> <td style="text-align: center;">B (OL1 &amp; OL2), B2 (OL3)</td> </tr> <tr> <td>Vaskiluodon Voima Oy<sup>(5)</sup>.....</td> <td>Lämpövoima (CHP)</td> <td style="text-align: center;">50</td> <td style="text-align: center;">V</td> </tr> <tr> <td>Voimalohi Oy.....</td> <td>Palveluyhtiö</td> <td style="text-align: center;">50</td> <td style="text-align: center;">–</td> </tr> </tbody> </table> <p>(1) Seuraavien lisäksi Liikkeeseenlaskijalla on M-sarjan osakkeita, jotka liittyivät Mussalon Voima Oy:öön, joka on vuonna 2017 selvitystilaan asetettu Liikkeeseenlaskijan 100 prosenttisesti omistama tytäryhtiö, ja C2-sarjan osakkeita liittyen Meri-Porin hiilivoimalaitokseen TVO:n C-sarjan osakkeiden kautta. PVO myi 31.12.2018 kaikki TVO:n C-sarjan osakkeet, jotka oikeuttivat Meri-Porin hiilivoimalaitoksen voimantuotantoon.</p> <p>(2) PVO-Lämpövoima Oy:n tuotannollinen toiminta päättyi vuonna 2015.</p> <p>(3) PVO-Vesivoima Oy:n kautta.</p> <p>(4) TVO:n päätöksenteko ja hallinto perustuvat TVO:n yhtiöjärjestykseen ja osakassopimukseen, joiden perusteella sekä huomioiden myös Liikkeeseenlaskijan oikeus nimittää TVO:n hallituksen jäsenet, Liikkeeseenlaskija pitää TVO:ta yhteisyrityksenä.</p> <p>(5) PVO sopi 4.4.2019 EPV Energia Oy:n kanssa järjestelystä, jossa se siirtää kaikki Vaskiluodon Voima Oy:n omaisuuserät ja liiketoiminnot EPV Energy Ltd:lle. Omaisuuserien omistusoikeus siirtyi 1.1.2023.</p>				Tuotantomuoto	Liikkeeseenlaskijan omistusosuus (prosenttia)	Energiaan oikeuttavat osakesarjat <sup>(1)</sup>	<b>Emoyhtiö ja tytäryhtiöt</b>				Pohjolan Voima Oyj.....	Emoyhtiö			PVO-Vesivoima Oy.....	Vesivoima	100	A	Hämeenkyrön Voima Oy.....	Lämpövoima (CHP)	84	G10	Kaukaan Voima Oy.....	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<b>Yhteisyritykset</b>																																																																																																
Teollisuuden Voima Oyj <sup>(4)</sup> .....	Ydinvoima	57,1	B (OL1 & OL2), B2 (OL3)																																																																																													
Vaskiluodon Voima Oy <sup>(5)</sup> .....	Lämpövoima (CHP)	50	V																																																																																													
Voimalohi Oy.....	Palveluyhtiö	50	–																																																																																													
B.9	Tulosennuste	Ei sovellu. Liikkeeseenlaskija ei ole antanut tulosennustetta.																																																																																														
B.10	Historiallisia taloudellisia tietoja koskevassa tilintarkastuskertomuksessa mahdollisesti esitettyjen muistutusten luonne	Ei sovellu. Historiallisia taloudellisia tietoja koskevissa tilintarkastuskertomuksissa ei ole esitetty muistutuksia.																																																																																														

## Jakso B – Liikkeeseenlaskija

Osatekijä	Tiedonantovelvollisuus	Tiedonanto
B.12	Valikoidut historialliset keskeiset taloudelliset tiedot	Seuraavissa taulukoissa esitetään Liikkeeseenlaskijan valikoituja konsernitilinpäätöstietoja ja muita tietoja 31.12.2018 ja 31.12.2017 päättyneiltä tilikausilta. Alla esitettävät valikoidut konsernitilinpäätöstiedot ovat peräisin Liikkeeseenlaskijan tilintarkastetuista 31.12.2018 ja 31.12.2017 päättyneiltä tilikausilta laadituista konsernitilinpäätöksistä.
		Liikkeeseenlaskijan konsernitilinpäätöstiedot on laadittu EU:n käyttöönottamien kansainvälisten tilinpäätösstandardien ("IFRS") mukaisesti.

		1.1.–31.12.	
		2018	2017
		(tilintarkastettu)	
		(tuhatta euroa)	
<b>KONSERNIN LAAJA TULOSLASKELMA</b>			
<b>Jatkuvat toiminnot</b>			
<b>Liikevaihto</b> .....		514 096	453 603
Liiketoiminnan muut tuotot .....		2 968	21 968
Materiaalit ja palvelut .....		-402 536	-352 573
Henkilöstökulut.....		-9 959	-10 511
Poistot ja arvonalentumiset .....		-39 048	-39 484
Liiketoiminnan muut kulut .....		-53 437	-52 016
Osuus osakkuus- ja yhteisyritysten tuloksista .....		-19 535	-9 424
<b>Liikevoitto/-tappio</b> .....		<b>-7 451</b>	<b>11 563</b>
Rahoitustuotot.....		2 728	4 329
Rahoituskulut.....		-27 637	-14 063
<b>Rahoitustuotot ja -kulut yhteensä</b> .....		<b>-24 909</b>	<b>-9 734</b>
<b>Voitto/tappio ennen veroja</b> .....		<b>-32 360</b>	<b>1 829</b>
Tuloverot .....		0	838
<b>Tilikauden voitto/tappio jatkuvista toiminnoista</b> .....		<b>-32 360</b>	<b>2 667</b>
<b>Lopetetut toiminnot</b>			
<b>Tilikauden voitto/tappio lopetetuista toiminnoista</b> .....		<b>2 611</b>	<b>-1 570</b>
<b>Tilikauden voitto/tappio</b> .....		<b>-29 749</b>	<b>1 097</b>
<b>Muut laajan tuloksen erät:</b>			
Erät, jotka saatetaan tulevaisuudessa siirtää tulosvaikutteisiksi			
Osuus yhteisyritysten muun laajan tuloksen eristä			
Myytavissä olevien sijoitusten käyvän arvon muutokset .....		0	-8
Rahavirran suojaukset.....		4 166	-5 369
Tilikauden muut laajan tuloksen erät yhteensä .....		4 166	-5 377
<b>Tilikauden laaja tulos yhteensä</b> .....		<b>-25 583</b>	<b>-4 280</b>
<b>Tilikauden tuloksen jakautuminen:</b>			
Emoyhtiön omistajille.....		-29 098	-10 392
Määräysvallattomille omistajille.....		-651	11 489
<b>Tilikauden tulos</b> .....		<b>-29 749</b>	<b>1 097</b>
<b>Tilikauden laajan tuloksen jakautuminen:</b>			
Emoyhtiön omistajille.....		-24 932	-15 769
Määräysvallattomille omistajille.....		-651	11 489
<b>Tilikauden laaja tulos</b> .....		<b>-25 583</b>	<b>-4 280</b>



**Jakso B – Liikkeeseenlaskija**

	31.12.	
	2018	2017
	(tilintarkastettu)	
	(tuhatta euroa)	
<b>KONSERNIN TASE</b>		
<b>VARAT</b>		
<b>Pitkäaikaiset varat</b>		
Aineettomat hyödykkeet.....	284 173	283 364
Aineelliset käyttöomaisuushyödykkeet.....	497 440	531 077
Osuudet osakkuus- ja yhteisyrityksissä.....	714 625	744 184
Muut rahoitusvarat.....	486	505
Lainat ja muut saamiset.....	<u>446 034</u>	<u>385 962</u>
<b>Pitkäaikaiset varat yhteensä</b> .....	<b>1 942 758</b>	<b>1 945 092</b>
<b>Lyhytaikaiset varat</b>		
Vaihto-omaisuus.....	12 038	5 190
Myyntisaamiset ja muut saamiset.....	84 399	86 452
Rahavarat.....	<u>59 598</u>	<u>43 857</u>
<b>Lyhytaikaiset varat yhteensä</b> .....	<b>156 035</b>	<b>135 499</b>
Myytävänä olevat varat.....	<u>4 653</u>	<u>8 845</u>
<b>Varat yhteensä</b> .....	<b><u>2 103 446</u></b>	<b><u>2 089 436</u></b>
<b>OMA PÄÄOMA</b>		
<b>Emoyhtiön omistajille kuuluva oma pääoma</b>		
Osakepääoma.....	65 293	65 293
Ylikurssirahasto.....	216 822	216 822
Sijoitetun vapaan oman pääoman rahasto.....	326 683	328 869
Arvonmuutosrahasto.....	1 700	-2 466
Kertyneet voittovarot.....	<u>165 879</u>	<u>192 792</u>
<b>Emoyhtiön omistajille kuuluva oma pääoman yhteensä</b> .....	<b>776 377</b>	<b>801 310</b>
<b>Määräysvallattomien omistajien osuus</b> .....	<b><u>40 515</u></b>	<b><u>42 197</u></b>
<b>Oma pääoma yhteensä</b> .....	<b>816 892</b>	<b>843 507</b>
<b>VELAT</b>		
<b>Pitkäaikaiset velat</b>		
Varaukset.....	3 345	4 491
Laskennalliset verovelat.....	0	0
Rahoitusvelat.....	1 107 672	1 040 611
Muut pitkäaikaiset velat.....	<u>6 293</u>	<u>2 993</u>
<b>Pitkäaikaiset velat yhteensä</b> .....	<b>1 117 310</b>	<b>1 048 095</b>
<b>Lyhytaikaiset velat</b>		
Rahoitusvelat.....	114 533	140 126
Ostovelat ja muut velat.....	<u>54 711</u>	<u>57 708</u>
<b>Lyhytaikaiset velat yhteensä</b> .....	<b>169 244</b>	<b>197 834</b>
Velat liittyen myytävänä oleviin varoihin.....	<u>0</u>	<u>0</u>
<b>Velat yhteensä</b> .....	<b><u>1 286 554</u></b>	<b><u>1 245 929</u></b>
<b>Oma pääoma ja velat yhteensä</b> .....	<b><u>2 103 446</u></b>	<b><u>2 089 436</u></b>

**Jakso B – Liikkeeseenlaskija**

	<b>31.12. ja 1.1.–31.12.</b>	
	<b>2018</b>	<b>2017</b>
	<b>(tilintarkastettu)</b>	
	<b>(tuhatta euroa)</b>	
<b>KONSERNIN RAHAVIRTALASKELMA</b>		
<b>Liiketoiminnan rahavirrat</b>		
Tilikauden voitto/tappio.....	-32 360	2 667
Oikaisut tilikauden voittoon/tappioon.....	83 058	42 563
Käyttöpääoman muutokset.....	-8 949	-447
Maksetut korot ja muut rahoituskulut.....	-12 651	-14 768
Saadut korot.....	2 584	2 278
Maksetut verot.....	-4	36
<b>Liiketoiminnan nettorahavirta.....</b>	<b>31 678</b>	<b>32 329</b>
<b>Investointien rahavirrat</b>		
Myydyt omistusyhteisyrittösoyakkeet.....	2	0
Investoinnit aineellisiin ja aineettomiin käyttöomaisuushyödykkeisiin.....	-5 538	-6 458
Aineellisten ja aineettomien hyödykkeiden myyntitulot.....	265	6 738
Myydyt muut osakkeet.....	15	0
Tytäryritysten luovutukset.....	0	16 685
Pääoman palautukset.....	3 310	0
Lainasaamisten takaisinmaksut.....	0	2 264
Myönnetyt lainat.....	-60 232	-60 231
Lyhytaikaisten sijoitusten lisäys (+) tai vähennys (-).....	0	0
Saadut osingot.....	7	8
<b>Investointien nettorahavirta.....</b>	<b>-62 171</b>	<b>-40 994</b>
<b>Rahoituksen rahavirrat</b>		
Osakeannista saadut maksut.....	0	49 305
Omien osakkeiden lunastus ja mitätöinti.....	0	-296
Pitkäaikaisten lainojen nostot.....	125 000	510 000
Pitkäaikaisten lainojen lyhennykset.....	-44 854	-538 493
Vakuudellisten rahoitusvelkojen lisäys (+) tai vähennys (-).....	-13 791	-13 649
Lyhytaikaisten korollisten velkojen lisäys (+) tai vähennys (-).....	-24 889	-27
Maksetut osingot.....	-311	-15 304
<b>Rahoituksen nettorahavirta.....</b>	<b>41 155</b>	<b>-8 464</b>
<b>Rahavarojen muutos.....</b>	<b>10 662</b>	<b>-17 129</b>
<b>Rahavarat tilikauden alussa.....</b>	<b>33 855</b>	<b>52 866</b>
Rahavarojen muutos.....	10 662	-17 129
Yritysjärjestelyjen rahavarat.....	-	-1 852
<b>Rahavarat tilikauden lopussa, jatkuvat toiminnot.....</b>	<b>44 517</b>	<b>33 885</b>
<b>Lopetetun toiminnon rahavarat.....</b>	<b>15 051</b>	<b>9 972</b>
<b>Rahavarat tilikauden lopussa.....</b>	<b>59 568</b>	<b>43 857</b>

### Jakso B – Liikkeeseenlaskija

<u>Osatekijä</u>	<u>Tiedonantovelvollisuus</u>	<u>Tiedonanto</u>
B.13	Viimeaikaiset tapahtumat, jotka ovat ratkaisevia arvioitaessa Liikkeeseenlaskijan maksukykyä	Ei sovellu. Ei ole olemassa Liikkeeseenlaskijaan liittyviä viimeaikaisia tapahtumia, jotka ovat ratkaisevia arvioitaessa Liikkeeseenlaskijan maksukykyä.
B.14	Riippuvuus muista konserniin kuuluvista yksiköistä	PVO-konsernin liiketoimintaa harjoitetaan pääasiallisesti Liikkeeseenlaskijan tytäryhtiöiden, osakkuusyhtiöiden ja yhteisyritysten kautta. Liikkeeseenlaskija on PVO-konsernin emoyhtiö.
B.15	Päätoimialat	Liikkeeseenlaskijan pääasiallinen tarkoitus yhtiöjärjestyksensä mukaisesti on tuottaa energiaa omakustannushintaan osakkeenomistajilleen, jotka ovat pääasiassa suomalaisia teollisuusyhtiöitä sekä yksityisiä ja kunnallisia energiayhtiöitä. Liikkeeseenlaskijan painopiste on vesi-, lämpö- ja ydinvoimassa.
B.16	Määräysvalta	Ei sovellu. Siltä osin kuin Liikkeeseenlaskija on tietoinen, Liikkeeseenlaskija ei ole suoraan tai välillisesti kenenkään omistuksessa tai määräysvallassa.
B.17	Luottoluokitukset	Ei sovellu. Liikkeeseenlaskijalle tai sen velka-arvopapereille ei ole annettu luottoluokituksia.

### Jakso C – Arvopaperit

Osatekijä	Tiedonantovelvollisuus	Tiedonanto
C.1	Kaupankäynnin kohteeksi otettavien arvopapereiden tyyppi ja laji	Senior-statuksinen vakuudeton velkakirjalaina, jonka pääoman määrä on 125 000 000 euroa. Kunkin arvo-osuuden yksikkökoko on 1 000 euroa. Velkakirjojen ISIN-tunnus on FI4000327820.
C.2	Arvopapereiden liikkeeseenlaskun valuutta	Euro.
C.5	Arvopapereiden vapaata luovutettavuutta koskevat rajoitukset	Kukin Velkakirja on vapaasti luovutettavissa sen jälkeen, kun se on kirjattu asianomaiselle arvo-osuustilille.
C.8	Arvopapereihin liittyvät oikeudet/ etuoikeusjärjestys	Velkakirjat ovat Liikkeeseenlaskijan suoria, ehdottomia, subordinoimattomia, takaamattomia ja vakuudettomia sitoumuksia, ja niillä on sama etuoikeusjärjestys toistensa kanssa ja vähintään sama etuoikeusjärjestys Liikkeeseenlaskijan kaikkien muiden nykyisten ja tulevien vakuudettomien ja subordinoimattomien sitoumusten kanssa lukuun ottamatta sitoumuksia, jotka voivat olla pakottavien lain säännösten nojalla etusijalla.
C.9	Korko/takaisinmaksu/ tuotto	<p>Velkakirjoille maksetaan korkoa 1,750 prosenttia vuodessa 8.6.2018 alkaen (kyseinen päivä mukaan lukien) Erääntymispäivään asti (kyseinen päivä pois lukien). Korko maksetaan vuosittain takautuvasti 8.6. kunakin vuonna alkaen 8.6.2019.</p> <p>Velkakirjat maksetaan takaisin täysimääräisesti nimellisarvostaan Erääntymispäivänä, ellei Liikkeeseenlaskija ole lunastanut Velkakirjoja tai ole maksanut Velkakirjoja ennenaikaisesti takaisin.</p> <p>Velkakirjojen efektiivinen tuotto 99,357 prosentin emissiokurssilla oli 1,886 prosenttia vuodessa Liikkeeseenlaskupäivänä.</p> <p>Liikkeeseenlaskijalla on oikeus lunastaa Velkakirjat kokonaan, muttei osittain, milloin tahansa alkaen, ja mukaan lukien, ensimmäisestä Pankkipäivästä (kuten määritelty Velkakirjojen ehdoissa ("Ehdot")) kolme (3) kuukautta ennen Erääntymispäivää.</p> <p>Velkakirjojen haltijoita edustaa Velkakirjojen haltijoiden kokous ("Velkakirjojen haltijoiden kokous") tai kirjallinen menettely.</p>
C.10	Yhteys johdannaiseen	Ei sovellu. Velkakirjoista maksettava korko ei ole yhteydessä johdannaiseen.
C.11	Kaupankäynnin kohteeksi ottaminen	Hakemus tehdään Velkakirjojen listaamiseksi Nasdaq Helsinkiin.

## Jakso D – Riskit

Osatekijä	Tiedonantovelvollisuus	Tiedonanto
D.2	Keskeiset liikkeeseenlaskijaan liittyvät riskit	<p><b>PVO:n toimintaympäristöön liittyviä riskejä ovat muun muassa seuraavat:</b></p> <ul style="list-style-type: none"> <li>• Energiantuotantoala on erittäin säänneltyä ja alaan vaikuttavissa eri laeissa ja asetuksissa voi tapahtua muutoksia;</li> <li>• Muutokset vesi- ja lämpövoiman tuotannon sääntelyssä voivat vaikuttaa haitallisesti PVO:hon;</li> <li>• Patoihin liittyvät viat voivat vaikuttaa haitallisesti PVO:n vesivoiman tuotantoon;</li> <li>• Liikkeeseenlaskijalla on vastuu TVO:n ydinjätteen käsittelystä;</li> <li>• Suuret haitalliset tapahtumat ja olosuhteet voivat vaikuttaa PVO:n toimintaan; ja</li> <li>• Valtiollisilla ja oikeudellisilla prosesseilla sekä välimiesmenettelyillä tai kanteilla voi olla haitallinen vaikutus PVO:hon.</li> </ul> <p><b>TVO:n ydinvoimatoimintaan liittyviä riskejä ovat muun muassa seuraavat:</b></p> <ul style="list-style-type: none"> <li>• TVO:n ydinvoimatoiminnan turvallisuuden ja vakauden jatkumisesta ei voi olla varmuutta;</li> <li>• Ydinjätteen hävittämiseen sisältyy riskejä;</li> <li>• TVO:n epäonnistuminen soveltuvan sääntelyn noudattamisessa voi johtaa sen toiminnan keskeyttämiseen ja vaikuttaa olennaisen haitallisesti sen liiketoimintaan ja taloudelliseen asemaan;</li> <li>• TVO:n toimintaan liittyy poliittisia riskejä;</li> <li>• Ei voi olla varmuutta siitä, että ydinpolttoaineen ja siihen liittyvien palvelujen kysynnän ja tarjonnan kehitys ei johtaisi TVO:n hankintaongelmiin; ja</li> <li>• Olkiluoto 3 EPR -projektiin liittyy monia riskejä.</li> </ul> <p><b>PVO:n rahoitukseen liittyviä riskejä ovat muun muassa seuraavat:</b></p> <ul style="list-style-type: none"> <li>• PVO altistuu rahoitus-, jälleenerahoitus- ja likviditeettiriskeille;</li> <li>• PVO altistuu korkoriskeille;</li> <li>• PVO altistuu vastapuoli- ja luottoriskeille rahoitustoimiensa kautta; ja</li> <li>• Liikkeeseenlaskijan taloudellinen asema on olennaisesti riippuvainen osakkeenomistajien sille ajoissa suorittamista maksuista.</li> </ul>
D.3	Tärkeimmät arvopapereille ominaiset riskit	<p><b>Velkakirjoihin liittyviä riskejä ovat muun muassa seuraavat:</b></p> <ul style="list-style-type: none"> <li>• Velkakirjat eivät välttämättä ole sopiva sijoituskohde kaikille sijoittajille;</li> <li>• Liikkeeseenlaskijan kyky tehdä Velkakirjojen mukaisia maksuja on alisteinen sen tytär- ja osakkuusyhtiöiden ja yhteisyritysten velkoihin nähden;</li> <li>• Liikkeeseenlaskijalla tai Velkakirjoilla ei ole luottoluokitusta;</li> <li>• Sijoittajat kantavat Liikkeeseenlaskijaa koskevan luottoriskin ja saattavat menettää Velkakirjoihin tekemänsä sijoituksen;</li> </ul>

## Jakso D – Riskit

<u>Osatekijä</u>	<u>Tiedonantovelvollisuus</u>	<u>Tiedonanto</u>
		<ul style="list-style-type: none"><li>• Koska Velkakirjoille on asetettu kiinteä korko, niiden hinta voi laskea korkotason muutoksista johtuen;</li><li>• Velkakirjat eivät anna äänioikeutta Liikkeeseenlaskijan yhtiökokouksissa;</li><li>• Velkakirjat ovat Liikkeeseenlaskijan vakuudettomia sitoumuksia;</li><li>• Sillä, että Liikkeeseenlaskija käyttää oikeuttaan tai velvollisuudesta lunastaa ja ostaa Velkakirjat ennen niiden erääntymistä, voi olla haitallinen vaikutus Liikkeeseenlaskijaan ja ulkona oleviin Velkakirjoihin;</li><li>• Liikkeeseenlaskijalla ei ole velvollisuutta hyvittää Velkakirjoihin liittyviä ennakonpidätyksiä tai vastaavia eriä;</li><li>• Velkakirjoihin liittyvien transaktioiden toteuttaminen on riippuvainen Euroclear Finlandin toiminnoista ja järjestelmistä;</li><li>• Lainsäädännössä voi tapahtua muutoksia Velkakirjojen liikkeessäolajakson aikana;</li><li>• Liikkeeseenlaskija saattaa pystyä sulautumaan, jakautumaan tai toteuttamaan liiketoimintakauppoja tai muutoin merkittäviä transaktioita, joilla voi olla olennaisen haitallinen vaikutus Velkakirjoihin ja Velkakirjojen haltijoihin;</li><li>• Liikkeeseenlaskija voi laskea liikkeeseen lisää velkaa ja/tai antaa vakuuksia;</li><li>• Velkakirjoissa ei ole kovenantteja koskien Liikkeeseenlaskijan taloudellista asemaa tai toimintaa;</li><li>• Ehtoja koskevat muutokset sitovat kaikkia Velkakirjojen haltijoita;</li><li>• Oikeudelliset seikat voivat rajoittaa tiettyjä sijoituksia;</li><li>• Oikeus saada Velkakirjojen perusteella maksuja on ajallisesti rajattu; ja</li><li>• Velkakirjoilla ei ole tällä hetkellä julkista markkinaa ja jos Velkakirjoille ei kehity aktiivista kaupankäyntimarkkinaa tai sitä ei pidetä yllä, sillä voi olla olennaisen haitallinen vaikutus Velkakirjojen markkinahintaan.</li></ul>

## Jakso E – Tarjous

<b>Osatekijä</b>	<b>Tiedonantovelvollisuus</b>	<b>Tiedonanto</b>
E.2b	Syyt tarjoamiseen/ varojen käyttö	Velkakirjojen liikkeeseenlaskusta kertyvät tuotot on käytetty yleisiin liiketoimintatarpeisiin, mukaan lukien investoinnit sekä tiettyjen olemassa olevien velkojen uudelleenrahoittaminen.
E.3	Tarjouksen ehdot	<p>Pääoman määrä: 125 000 000 euroa.</p> <p>Velkakirjojen muoto: Euroclear Finlandin Infinity-järjestelmän arvo-osuuksia.</p> <p>Korko: 1,750 prosenttia vuodessa.</p> <p>Velkakirjojen efektiivinen tuotto Liikkeeseenlaskupäivänä: Emissiohinnan ollessa 99,357 prosenttia, 1,886 prosenttia vuodessa.</p> <p>Koronmaksupäivät: Vuosittain takautuvasti 8.6.2019 alkaen ja tämän jälkeen 8.6. kunakin vuonna Erääntymispäivään asti.</p> <p>Liikkeeseenlaskupäivä: 8.6.2018.</p> <p>Erääntymispäivä: 8.6.2023.</p> <p>Takaisinmaksu: Erääntymispäivänä.</p> <p>Ennenaikainen lunastus (Liikkeeseenlaskijan oikeus ennenaikaiseen takaisinmaksuun): kolme (3) kuukautta ennen Erääntymispäivää.</p> <p>Kovenantit: Määräysvallan vaihtuminen, ristiin eräännyttäminen, panttaamattomuussitoumus ja vakuudellisen velan määrän ylitys.</p> <p>Emissiokurssi: 99,357 prosenttia.</p> <p>Vähimmäismerkintämäärä: 100 000 euroa.</p> <p>Arvo-osuuden yksikkökoko: 1 000 euroa.</p> <p>Sovellettava laki: Suomi.</p>
E.4	Liikkeeseenlaskuun liittyvät olennaiset intressit / eturistiriidat	Järjestäjien intressi: Tavanomainen liiketoimintaintressi rahoitusmarkkinoilla.
E.7	Arvioidut kustannukset, jotka veloitetaan sijoittajilta	Liikkeeseenlaskija ei veloita kuluja sijoittajalta Velkakirjoihin liittyen.

## RISK FACTORS

*The Issuer believes that the following factors may affect its ability to fulfil its obligations under the Notes. In addition, factors that are material for the purpose of assessing the market risks associated with the Notes are described below. All of these factors are contingencies that may or may not occur and the Issuer is not in a position to express a view on the likelihood of any such contingency occurring. In particular, the order in which the risk factors are presented does not reflect the probability of their realisation or order of importance. Should one or more of the risk factors described herein materialise, it could have a material adverse effect on PVO's business, financial position and results of operations and, therefore, on the Issuer's ability to fulfil its obligations under the Notes as well as the market price of the Notes.*

*The Issuer believes that the factors described below represent the principal risks inherent in investing in the Notes, but the Issuer may be unable to pay interest, principal or other amounts on or in connection with the Notes for other reasons that may not be considered significant risks by the Issuer based on information currently available to it or that it may not currently be able to anticipate. Prospective investors should also read the detailed information set out elsewhere in this Listing Prospectus and reach their own views prior to making any investment decision.*

*This Listing Prospectus contains forward-looking statements that involve risks and uncertainties. The Issuer's actual results could materially differ from those anticipated in these forward-looking statements as a result of certain factors, including the risks described below and elsewhere in this Listing Prospectus. See "General Information—Special Cautionary Notice Regarding Forward-looking Statements".*

### **Risks Related to PVO's Operations**

***The energy production industry is highly regulated and various laws and regulations affecting the industry are subject to change***

The energy production industry is highly regulated and the operations of PVO are subject to various laws and regulations and require various permits and licences. Inasmuch as these laws and regulations are periodically amended, permits and licences are modified, renewed or revoked or their application or enforcement is changed, significant costs in complying with new and more stringent regulations may be imposed on PVO. In particular, various operations of the Issuer, its subsidiaries, associated companies and joint ventures require environmental and other regulatory permits or licences that are subject to modification, renewal or, in certain circumstances, revocation by the issuing authorities. As a result, the Issuer's subsidiaries, associated companies and joint ventures may be unable to obtain or maintain all required regulatory permits and licenses required to conduct their operations. Compliance with the requirements under various permits and licences may cause PVO to incur significant additional operating costs, and failure to comply with such requirements could result in the imposition of fines and/or other liability. In addition, the cost, for example, of installing the necessary equipment to comply with new or amended environmental laws, regulations and orders may render some of PVO's power production facilities uneconomical, which may cause PVO to cease energy production operations in the respective facilities. See also "*—Changes to the regulatory framework governing PVO's hydro and thermal operations could adversely affect PVO*" below.

Events at PVO's power plants, as well as those owned by others, may lead to changes in laws or regulations or the conditions of the applicable permits or licences, or the authorities' interpretation thereof, or may cause the authorities to increase oversight activity or initiate actions to modify, suspend or revoke permits or licences, shut down a power plant, or impose penalties. As a result, if a major incident were to occur at a power production unit, whether a PVO power plant or not, it could adversely affect PVO's business and financial position and adversely affect the Issuer's ability to fulfil its obligations under the Notes issued and the value of the Notes. See also "*—Risks related to Nuclear Operations of TVO—Disposal of nuclear waste includes risks*" and "*—Risks related to Nuclear Operations of TVO—A failure by TVO to comply with applicable regulations could result in interruption of its operations and have a material adverse effect on its business and financial position*" below.

Furthermore, the energy production industry is subject to changes in the political environment and the perception of the industry that may affect the treatment of various forms of energy. For example, tax rates may be increased, and new taxes can be introduced, in relation to certain forms of energy production, or in relation to the energy production industry. PVO is subject to various taxes, such as income, sales and real estate taxes. In January 2018, the Finnish Ministry of Finance published its proposal to implement the EU directive (2016/1164) laying down rules against tax avoidance practices that directly affect the functioning of the internal market. The first amendments in the legislation on taxation of business income entered into force on 1 January 2019. Among other things, the amendments impose limitations on deductibility of interest expenses. As a result of the amendments, PVO may have to pay corporate taxes in the future in spite of the operation of the cost-price principle (the "**Mankala Principle**"). This could increase PVO's production costs and adversely affect its cost-competitiveness and, therefore, potentially have an adverse effect on PVO's business and financial position. The Finnish Ministry of Finance continues to prepare so-called "infrastructure exception" in accordance with a statement from the Finnish Parliament ("**Finnish Parliament**" or "**Parliament**"), but there can be no assurance that such exception would be implemented, or that it would be applicable to PVO, in the final law.



Major adverse changes to the regulatory framework governing the energy production industry, or changes to other laws or regulations, including tax laws, could adversely affect PVO's business and financial position and adversely affect the Issuer's ability to fulfil its obligations under the Notes issued and the value of the Notes.

### ***Changes to the regulatory framework governing PVO's hydro and thermal operations could adversely affect PVO***

Hydropower procured by the Issuer is produced at cost-price principle by the Issuer's wholly-owned subsidiary PVO-Vesivoima Oy. PVO-Vesivoima Oy owns and operates hydropower plants along the rivers Kemijoki, Iijoki, Kokemäenjoki and Tengeliönjoki in Finland. In Finland, waterways and operation of hydropower plants are regulated in laws and regulations as well as permit conditions monitored by the Centre for Economic Development, Transport and the Environment of Finland. In addition to such laws and regulations, PVO-Vesivoima Oy has an obligation to sustain fish stocks by stocking fry and transporting lamprey past dams and power stations in the river Iijoki and the sea area, and together with Kemijoki Oy, in the river Kemijoki and the sea area. Environmental permits regarding the regulation of water flow can be amended to reduce the negative effects of the water flow regulation. In addition, improving the living conditions of migratory fish, salmon in particular, may lead to more extensive maintenance of river basins and to the construction of fishways. Arranging migration of fish, rivers may require specific power plant dam and water draining solutions and require significant investments by the PVO Group. Also, the original obligatory stocking amounts of fry may be concluded to be insufficient. In March 2017, the Centre for Economic Development, Transport and the Environment of Lapland submitted an application to the Regional State Administrative Agency for Northern Finland concerning fish stocking and fish stock management obligations with regard to the Kemijoki river. In October 2017, similar application was submitted concerning the Iijoki river. In addition to new requirements, such as, for example, the requirement to extend the existing fish stocking obligations and to construct new fishways, these applications include additions to the current obligations. The Regional State Administrative Agency did not announce applications during 2017. The hydropower producers operating in the Iijoki and Kemijoki rivers, PVO-Vesivoima Oy and Kemijoki Oy, consider the proposed changes unfounded. The application process is pending as of the date of this Listing Prospectus. If imposed on PVO-Vesivoima Oy, among others, such changes could require significant investments on the part of the PVO Group (see "*Information about PVO—Environment—Hydropower*").

Thermal power procured by the Issuer is produced at cost-price principle by the Issuer's wholly- or partially-owned subsidiaries, associates and joint ventures. As of the date of this Listing Prospectus, PVO has nine (9) wholly- or partially-owned combined heat and power ("**CHP**") plants. Eight (8) of these are bioenergy power plants, fuelled mainly by wood, peat and solid recovered fuel ("**SRF**"). Vaskiluoto 2 power plant unit operated by Vaskiluodon Voima Oy, the Issuer's 50 percent-owned joint venture, is coal-fired CHP plant with a biomass gasification plant to replace up to 40 percent of the use of coal with biomass. On 4 April 2019, the Issuer agreed on the arrangement with EPV Energy Ltd to transfer all assets and business operations of Vaskiluodon Voima Oy to EPV Energy Ltd. The ownership of the assets will transfer on 1 January 2023. See "*Information about PVO—Recent Events*" for more information. The production operations of the coal-fired condensing power plants owned by PVO-Lämpövoima Oy, a wholly-owned subsidiary of the Issuer, in Kristiinankaupunki (Kristiina 2) and Pori (Tahkoluoto) were ceased in 2015. Since then, the business of PVO-Lämpövoima Oy has been reported as discontinued operation in the consolidated financial statements of the Issuer.

Thermal operations of PVO are subject to environmental laws and regulations adopted by the European Union (the "**EU**") and Finnish authorities. Directive 2010/75/EU on industrial emissions (the "**IE Directive**"), which entered into force in January 2011, has been implemented through the Environmental Protection Act and some related decrees in Finland. The IE Directive establishes requirements on power plants' emissions into air. These requirements have been applied to existing power plants since the beginning of 2016. Some of the power plants of PVO are included in the national IE Directive transition plan approved by the European Commission in spring 2014. The transition plan allows the committed power plants some flexibility in the adoption of the new emission limits, with the transition period ending in June 2020. In August 2017, the EU published the updated reference document for Best Available Techniques ("**BAT**") for Large Combustion Plants ("**LCP-BREF**"). The document applies to thermal power plants of PVO. The IE Directive establishes that BAT conclusions made on the basis of the BAT reference documents are binding, and as a result, the emission limits are expected to become more stringent. Plant operations must comply with the related requirements within four years from the establishment of BAT conclusions. However, for majority of PVO's CHP plants, whose main activity is the delivery of process steam for industrial operations, the transition period is expected to be longer depending on when the BAT conclusions of the relevant industry sector will be published.

Changes to the regulatory framework governing PVO's hydro and thermal operations could adversely affect PVO's financial position and adversely affect the Issuer's ability to fulfil its obligations under the Notes issued and the value of the Notes.

### ***Dam failure could adversely affect PVO's hydro operations***

Operating hydro facilities includes operational risks that can lead to physical damages, technical disruptions, third-party liabilities, environmental issues and other damage or loss events. To manage such risks, PVO-Vesivoima Oy continuously monitors the condition of the dams and performs regular inspections and measurements to ensure their safety. There is a

systematic long-term investment program to ensure that appropriate condition of the dams is maintained and PVO-Vesivoima Oy targets to carry out preventive overhauls at its hydropower plants every 15 to 20 years. In Finland, dams are categorised into three categories based on the size of the dam. Category 1 and category 2 dams are required to be inspected annually based on the surveillance program approved by the Centre for Economic Development, Transport and the Environment of Finland. In addition, Finnish authorities inspect all dams every five years. PVO-Vesivoima Oy has three (3) category 1 and eight (8) category 2 dams and is a shareholder in four (4) category 2 dams (see “*Information about PVO—Hydropower*”). To assess the possible consequences of a dam failure, third-party assessments have been conducted regarding the largest dams. Despite the measures taken, no assurance can be given that a dam failure will not occur in the future. Should such risk materialise, it could adversely affect PVO’s financial position and adversely affect the Issuer’s ability to fulfil its obligations under the Notes issued and the value of the Notes.

#### ***The Issuer has a liability in relation to TVO’s nuclear waste management***

In accordance with the Finnish Nuclear Energy Act (990/1987, as amended; *Fi: ydinenergi laki*) (the “**Finnish Nuclear Energy Act**”), cost estimates in respect of funding obligations for nuclear waste management are updated annually and the related technical plans and total cost estimates every third year. The difference between the funding obligation target decided by the Ministry of Employment and the Economy and TVO’s actual share of the Finnish State Nuclear Waste Management Fund (the “**Nuclear Waste Management Fund**”) is paid during the first quarter each year.

TVO has an obligation, prior to the commencement of the waste generating operation and, otherwise, in any case by the end of June each year, to supply the Finnish State with collateral securities to cover the uncovered portion of nuclear waste management liability, if any, as well as a liability for any unforeseen expenses of nuclear waste management. Pursuant to TVO’s Articles of Association, the Issuer bears partial responsibility, proportionate to its holding of the share series concerned (B-series), for the costs of the management and disposal of nuclear waste produced by TVO’s Olkiluoto nuclear power plant units in the same manner as for the other fixed annual costs of TVO under TVO’s Articles of Association. Accordingly, as a shareholder of TVO, the Issuer has issued to the Finnish State a directly enforceable guarantee proportionate to its holding of the series of TVO shares concerned (B-series). As of 31 December 2018, the guarantee issued by the Issuer amounted to EUR 77 million. The commencement of electricity production of the third nuclear power plant unit of TVO, Olkiluoto 3 EPR (“**OL3 EPR**”), is expected to increase the required total amount of the guarantee by approximately EUR 243 million. Increases in the costs of the management and disposal of nuclear waste produced by TVO’s Olkiluoto power plant units or in the amount of or other adverse changes to requirements related to the obligations of the Issuer as a shareholder of TVO could adversely affect the Issuer’s financial position and adversely affect the Issuer’s ability to fulfil its obligations under the Notes issued and the value of the Notes.

#### ***Major adverse events or circumstances may affect PVO’s operations***

The Issuer is subject to the risk that its power supplies to its shareholders could be disrupted due to major external adverse events outside of the control of PVO, such as (but not limited to) significant changes in, or cancellation of, operating or other necessary licenses (*e.g.*, environment licenses) related to hydro, thermal and nuclear power plants operated by the PVO Group or the Issuer’s associated companies and joint ventures; changes in laws or regulations governing the operation of hydro, thermal, and nuclear power plants in Finland generally or hydro, thermal or nuclear power plants operated by the PVO Group or the Issuer’s associated companies or joint ventures specifically; issues related to the availability of hydro, thermal or nuclear power plant equipment, nuclear fuel and service providers in relation to hydro, thermal or nuclear power plants operated by the PVO Group and the Issuer’s associated companies or joint ventures or disputes related to the equipment, nuclear fuel or services provided (including possible financial distress of such providers); or catastrophic events in relation to hydro, thermal or nuclear power plants, such as fires, explosions, floods, terrorist activities, pandemics, and other similar destructive or disruptive events, operated by the PVO Group or the Issuer’s associated companies and joint ventures.

As discussed in “*Information about PVO—Operating Model of the Issuer*”, the Issuer operates based on the Mankala Principle and, under its Articles of Association, the Issuer supplies energy to its shareholders at cost. Each of the shareholders of each series of the Issuer’s shares bears their share of the variable and fixed costs related to the power plant unit or other units represented by such series of shares, as specified in the Articles of Association of the Issuer.

In the event that there would be a material disruption in the actual or scheduled deliveries of energy to the Issuer’s shareholders as a result of any major adverse event, such as those described above; a failure to start or significant delay in starting regular power production by any new power plant unit of the PVO Group or the Issuer’s associated companies and joint ventures; a failure to operate any of existing or new power plant units of the PVO Group or the Issuer’s associated companies and joint ventures in a commercially acceptable manner due to a substantially lower than anticipated power production capacity or higher energy prices or for any other reason, or PVO incurring material unexpected liabilities or costs in relation to any of the above or otherwise, it could result in the impairment of the relevant asset and could have a material adverse effect on the viability of the operating principle of the Issuer or on its business or financial position. Further, inasmuch as the shareholders of the Issuer are, in accordance with the Articles of Association of the Issuer, only responsible for the fixed and variable costs in respect of the energy procured by the Issuer, the Issuer may not invoice its

shareholders for any costs incurred by the Issuer related to investments in any power plant unit before the start of power production in such a unit. The Issuer capitalises such costs and invoices the capitalised costs to its shareholders, beginning from the start of power production by the relevant unit, over the estimated useful life of the investment or at faster pace, in each case, as determined by the Board of Directors of the Issuer in accordance with the Articles of Association of the Issuer. To finance such investments, the Issuer obtains external financing from third parties and has also received equity capital injections from its shareholders in the past. Accordingly, a failure to start or a significant delay in starting power production in any new power plant unit subject to an investment by the Issuer could result in an impairment of relevant assets and the Issuer not being able to pass on to its shareholders investment and other costs related to such power plant unit, which could have a material adverse effect on the Issuer's business and financial position and could result in the insolvency of the Issuer. See "*Information about PVO—Operating Model of the Issuer*".

Should, in the event any such risk materialises or otherwise the Issuer's shareholders be requested to provide additional financing to the Issuer in order to cover any liabilities or costs that go beyond those allocated to the shareholders pursuant to the Articles of Association of the Issuer, no assurance can be given that the shareholders would be prepared to provide such additional financing to the Issuer and a decision by the shareholders not to provide such additional financing, together with a failure of the Issuer to secure such additional financing from third parties, could have a material adverse effect on its business and financial position and could result in the insolvency of the Issuer. See "*—Risks related to PVO's Financing—PVO is exposed to financing, refinancing and liquidity risk*" below.

#### ***Governmental, legal or arbitration proceedings or claims could have a material adverse effect on PVO***

The Issuer, its subsidiaries, associated companies and joint ventures may from time to time be involved in, or a subject of, governmental, legal and arbitration proceedings and claims relating to their respective operations. The outcome of any governmental, legal or arbitration proceedings or claim is not possible to predict, and it is also not possible to rule out an unfavourable outcome in ongoing proceedings, or any proceedings that may arise in the future, which could have a material adverse effect on the Issuer's or its subsidiaries', associated companies' and joint ventures' business and financial position and, thereby, on the Issuer's ability to fulfil its obligations under the Notes issued and the value of the Notes. See "*—Risks related to Nuclear Operations of TVO—There are several risks related to the Olkiluoto 3 EPR project*" below and "*Additional Information—Governmental, Legal and Arbitration Proceedings*".

#### **Risks Related to Nuclear Operations of TVO**

*The information below regarding risks associated with TVO's Nuclear Operations has been derived from information made public by TVO, including TVO's annual report for the year ended 31 December 2018, interim report for the three months ended 31 March 2019 and the Base Prospectus relating to TVO's Euro Medium Term Note programme, dated 29 June 2018 (as supplemented on 6 November 2018). See "General Information—Other Information Derived from Third Party Sources".*

#### ***There can be no assurance that safety and stability of TVO's nuclear operations will continue***

The nuclear power supplied by the Issuer to its shareholders is produced at cost-price principle by TVO, a 57.1 percent-owned joint venture of the Issuer (see "*Information about TVO*"). TVO has two nuclear power plant units, Olkiluoto 1 ("**OL1**") and Olkiluoto 2 ("**OL2**"), located in Olkiluoto in Eurajoki, Finland.

Throughout their approximately 40 years of commercial operations, TVO's nuclear power plant units OL1 and OL2 have exhibited high load factors and low incident frequencies and, according to public statements by TVO, TVO's management considers this as evidence of the high reliability and safety of the operations, which also have underpinned the financial stability of TVO. However, no assurances can be given that such reliability and safety of operations, as well as financial stability, will continue and any such discontinuity could not adversely affect TVO, and, as a result, also the Issuer. If materialised, any incidents that would undermine the safety and stability of TVO's operations could have a material adverse effect on TVO's, and, as a result, also the Issuer's business and financial position and adversely affect the Issuer's ability to fulfil its obligations under the Notes issued and the value of the Notes.

#### ***Disposal of nuclear waste includes risks***

In order to reduce the risk of nuclear irradiation, multi-layered containment systems and sophisticated safety protocols are used by TVO to effectively isolate radioactive materials from the surrounding environment during the process of interim storage, packaging, transport, relocation and encasement of nuclear waste in the final storage repositories. Nevertheless, the risk of radioactive leakage into the environment at various stages of this process, as well as from the final storage facilities themselves, cannot be excluded entirely and, should such risk materialise, it could have a material adverse effect on TVO's business and financial position and any such event could adversely affect TVO's and, as a result, also the Issuer's business and financial position and adversely affect the Issuer's ability to fulfil its obligations under the Notes issued and the value of the Notes.

TVO bears full legal and financial responsibility for the management and disposal of nuclear waste produced by the Olkiluoto nuclear power plant units. The future cost of containing the nuclear waste and maintaining the storage facilities over time is to be paid for from the Nuclear Waste Management Fund to which the nuclear power producers in Finland, including TVO, make annual contributions. Contributions to the Nuclear Waste Management Fund are calculated on the basis of actual estimates of the future cost of the management of such nuclear waste. However, if the amounts provided by the Nuclear Waste Management Fund were ever to be insufficient to cover the actual costs of managing the nuclear waste, then TVO would be responsible for its *pro rata* share of any such excess cost, which could, in turn, affect the Issuer's liability in relation thereto. See “—Risks related to PVO's Operations—The Issuer has a liability in relation to TVO's nuclear waste management” above.

***A failure by TVO to comply with applicable regulations could result in interruption of its operations and have a material adverse effect on its business and financial position***

The operation of nuclear facilities depends on a number of regulations including, but not limited to, regulations concerning safety, technical specifications and the transport and storage of nuclear material. A failure by TVO to comply with applicable regulations could result in an interruption of its operations and could have a material adverse effect on its business and financial position. Such interruption could adversely affect TVO's and, as a result, also the Issuer's business and financial position and adversely affect the Issuer's ability to fulfil its obligations under the Notes issued and the value of the Notes.

On 26 January 2017, TVO submitted to the Ministry of Economic Affairs and Employment (the “MEE”) an application for the renewal of the operating licence of OL1 and OL2 for the period ending at the end of 2038. In May 2018, the Radiation and Nuclear Safety Authority (“STUK”) announced that it supports TVO's application for extending the operating licences of the OL1 and OL2 units of the Olkiluoto nuclear power plant until the end of 2038. Following STUK's statement, the Finnish Government (“Finnish Government” or “Government”) approved the extension of the operating licences for OL1 and OL2 units on 20 September 2018 until the end of 2038. TVO submitted its application for the operating licence for the third nuclear power plant unit, OL3 EPR to the MEE on 14 April 2016. On 25 February 2019, STUK gave its statement on the operating licence application of OL3 EPR nuclear plant unit. In its statement, STUK did not see any obstacles for granting the licence as applied until the end of 2038. Following STUK's statement, the Finnish Government granted the operating licence for OL3 EPR nuclear plant unit on 7 March 2019. TVO will still need a separate permission from STUK for the loading of the nuclear fuel.

Due to the Fukushima Dai-ichi nuclear power plant accident in Japan in March 2011, a review of nuclear plant safety measures was initiated in Europe by the European Commission. The report by the European Commission released in April 2012 stated that the safety in the nuclear power plants in the EU is at a good level. According to the report, however, national measures are needed especially for preparing for the consequences of extreme conditions. In Finland, STUK started, at the request of the MEE, an assessment on how nuclear power plants in Finland have prepared for the impacts that floods and other extreme conditions may have on the functioning of the facilities. According to the final report given by STUK in 2012, the safety of Finnish nuclear power plants, including provisions for severe accidents, earthquakes and extreme weather conditions, has been improved systematically since the plants were commissioned. STUK, however, raised some new questions and suggestions for improvements. Such improvements are currently being implemented for OL1 and OL2 to include reducing the dependence of cooling needed in emergency situations on the electrical systems that are designed to reduce such dependence. In May 2013, TVO signed an agreement for the delivery of emergency diesel generators and associated auxiliary systems. According to public statements by TVO, the replacement project of the emergency diesel generators is the largest individual plant modification project ever undertaken in Olkiluoto. According to public statements by TVO, the total investment of the replacement project is estimated to be more than EUR 100 million. The project is estimated by TVO to continue until 2022. STUK updated its original 2012 Finnish National Action Plan in December 2014.

As a result of the safety assessments and nuclear stress tests undertaken as part of its review of safety measures in the nuclear industry, the European Commission amended the Nuclear Safety Directive (Council Directive 2009/71/EURATOM) with the Nuclear Safety Directive Amendment (Council Directive/2014/87/EURATOM), which came into force in August 2014. The amended directive aims to strengthen the powers and independence of national safety authorities and introduces EU wide safety objectives. It also establishes a European system of regular peer reviews. The amendments to the Finnish Nuclear Energy Act implementing the directive entered into force on 1 January 2018. According to public statements by TVO, the legislative amendments are not considered to result in significant changes for TVO or require significant investments by TVO.

According to public statements by TVO, TVO's management is currently not aware of any deficiencies in safety measures in the Olkiluoto nuclear power plant units. However, the operation of nuclear power units is complex and requires compliance with a number of regulations including, but not limited to, regulations concerning safety, technical specifications and the transport and storage of nuclear material. A failure by TVO to comply with applicable regulations or any new regulations that may be introduced could result in interruption of its operations and have a material adverse

effect on its business and financial position. In addition, no assurance can be given that any new legislation would not adversely affect TVO's business and financial position due to significant new investments required, and that any such changes could not adversely affect TVO's and, as a result, also the Issuer's business and financial position and adversely affect the Issuer's ability to fulfil its obligations under the Notes issued and the value of the Notes.

***There are political risks relating to TVO's business operations***

A decision in principle to build a new nuclear power plant has been made by the Finnish Government, but such a decision requires ratification by the Finnish Parliament by a simple majority. Once such ratification has been obtained, a construction licence can be approved by the Finnish Government. Furthermore, in order to operate a nuclear power plant, an operating licence granted by the Finnish Government is required. If due to a political decision, the licence to construct or operate a nuclear facility is cancelled or the licence to operate a nuclear facility is denied, the holder of the cancelled licence or the applicant whose licence to operate the nuclear facility has been denied, is entitled to a reasonable compensation from the State of Finland for the direct expenses incurred in the construction of the facility.

According to public statement by TVO, TVO's management is not aware of any plans to change Finnish legislation concerning the licensing and compensation procedure. However, no assurance can be given that such changes will not occur in the future or that other laws or regulations, including tax laws, that could have a material effect on TVO's business and financial position, will not be passed and that any such change could not adversely affect TVO's and, as a result, also the Issuer's business and financial position and adversely affect the Issuer's ability to fulfil its obligations under the Notes issued and the value of the Notes.

***No assurance can be given that developments in the demand and supply for nuclear fuel and related services will not result in procurement problems for TVO***

Procurement of nuclear fuel involves the following three main elements: the purchase of raw uranium; uranium enrichment services; and nuclear fuel manufacture. Throughout its history, TVO has followed a policy of maintaining relationships with a number of suppliers of the aforesaid elements. This policy, the aim of which has been to diversify supply sources and to ensure competitive pricing for each element has, in the TVO's management's opinion, resulted in reliable and cost efficient fuel procurement. According to public statements by TVO, TVO's management does not currently foresee any major difficulties in obtaining nuclear fuel. However, the cost at which uranium is available changes according to fluctuations in the world markets, and is influenced by fluctuations in the price of other fuels, such as oil. Most of these services are procured under long term contracts, however, no assurance can be given that developments in the demand and supply for nuclear fuel and related services will not result in procurement problems for TVO and, as a result, have a material adverse effect on TVO's business and financial position and that any such developments could not adversely affect TVO's and, as a result, TVO's business and financial position and adversely affect the Issuer's ability to fulfil its obligations under the Notes issued and the value of the Notes.

***There are several risks related to the Olkiluoto 3 EPR project***

TVO is in the process of constructing a third nuclear power plant unit, OL3 EPR, at the Olkiluoto site (see "*Information about TVO—TVO's Operations—Nuclear Operations—Olkiluoto 3 EPR*"). OL3 EPR was commissioned as a turnkey project from a consortium formed by Areva GmbH, Areva NP SAS ("**Areva NP**") and Siemens AG (together, the "**Supplier**"). The members of the consortium are jointly and severally liable for the obligations under the contract for the construction of OL3 EPR between the Supplier and TVO (the "**Plant Contract**"). Under the Plant Contract, the Supplier guaranteed a completion date of 30 April 2009, however, several delays in the completion of OL3 EPR throughout the duration of the project were reported. Due to the delays in the construction of the OL3 EPR project, TVO was party to arbitration proceedings under the Rules of the International Chamber of Commerce ("**ICC**") with respect to costs and losses incurred in relation thereto.

In March 2018, Areva NP, Areva GmbH, Areva group parent company Areva SA, Siemens AG and TVO signed a global settlement agreement and certain ancillary agreements (the "**GSA**"). In addition to settling all on-going legal actions related to the OL3 EPR project, the GSA is aimed at securing the provision of adequate and competent technical and human resources as well as funds for completion and start-up of the OL3 EPR until the end of the applicable guarantee periods. For more details on the GSA, see "*Information about TVO—TVO's Operations—Nuclear Operations—Olkiluoto 3 EPR*" and "*Additional Information—Governmental, Legal and Arbitration Proceedings—Joint Ventures*".

When entering into the GSA, the regular electricity production at the OL3 EPR was scheduled to start in May 2019. According to the schedule provided by the Supplier in November 2018, nuclear fuel was planned to be loaded into the reactor in June 2019, the first connection to the grid was planned to take place in October 2019, and the start of regular electricity production of the OL3 EPR nuclear power plant unit was planned to take place in January 2020.

According to a stock exchange release published by TVO on 10 April 2019, the Supplier is expected to update the schedule for OL3 EPR project and deliver a new schedule to TVO by the end of June 2019. Based on the information provided by the Supplier, nuclear fuel will not be loaded to the reactor at least before the end of August 2019.

The GSA includes an incentive and penalty payment mechanism under which incentives and penalties may be payable by TVO or the Supplier, respectively. The Supplier was entitled to receive an incentive payment upon timely completion of the OL3 EPR project. In the event that the Supplier fails to complete the OL3 EPR project by the end of 2019, it has agreed to pay penalties to TVO from such delay. The amount of such penalties depends on the actual completion date of the project and, in any case, is limited to a maximum of EUR 400 million. In addition, the GSA sets up several funding mechanisms to secure the completion of the OL3 EPR covering all guarantee periods, including a trust funded by Areva NP, Areva GmbH and Areva SA to secure the financing of the costs of completion and start-up of the OL3 EPR. In the event that the Supplier fails to complete the OL3 EPR project by 30 June 2021, TVO has a right to terminate the Plant Contract upon notice.

According to public statements by TVO, as the OL3 EPR project is still on-going, no assurance can be given that the parties will meet their respective obligations under the Plant Contract and the GSA. A failure by one or more of the Supplier consortium companies, or TVO, to meet their respective obligations could further delay the start of regular electricity production and result in additional costs for TVO and subject it to new legal proceedings. If materialised, such failure could have a material adverse effect on TVO's business and financial position. Consequently, any such arbitrations or proceedings could adversely affect TVO's and, as a result, PVO's business and financial position and adversely affect the Issuer's ability to fulfil its obligations under the Notes issued and the value of the Notes.

### **Risks Related to PVO's Financing**

#### ***PVO is exposed to financing, refinancing and liquidity risk***

Financing and liquidity management within the PVO Group is managed centrally by the PVO Group's Treasury. According to its financial policy, the PVO Group should maintain diversified funding sources and a diversified financing structure in terms of the PVO Group's debt maturity profile. The PVO Group's financial policy also prescribes that all debt should be maintained in euro and, where debt is not incurred in euro, it should be hedged with appropriate instruments to ensure that exchange rate risk is managed. All the PVO Group's excess cash positions are centralised to the Issuer either through internal cash-pools or otherwise. The Issuer also maintains liquidity lines available for its subsidiaries to cover short-term liquidity needs. The Issuer may also grant long-term loans to subsidiaries although, according to the PVO Group's financial policy, each company belonging to the PVO Group raises external long-term debt financing primarily in its own name. According to the PVO Group's financial policy, all subsidiaries should maintain an equity-to-assets ratio above 27 percent. Joint ventures and associated companies manage their own financing and liquidity needs independently according to their own respective financial policies.

In the past, the Issuer and its subsidiaries, associated companies and joint ventures have been able to obtain adequate financing and hedging arrangements and refinancing of maturing debt has not constituted a difficulty or significantly increased financing costs. However, no assurances can be given that the Issuer and its subsidiaries, associated companies and joint ventures will be able to successfully obtain additional financing for investments needs or to manage debt maturities and refinance or renegotiate existing debt as it matures, due to changes in market conditions affecting generally the availability of financing or due to developments specific to the Issuer, its subsidiaries, associated companies or joint ventures, which could adversely affect PVO's business and financial position as well as the Issuer's ability to fulfil its obligations under the Notes issued and the value of the Notes.

The Issuer procures energy for its shareholders primarily from its subsidiaries, associated companies and joint ventures that also operate based on the Mankala Principle and therefore, as a shareholder of these companies, the Issuer is subject to payment obligations towards these companies for its proportionate share of costs in accordance with the articles of association of each such company, as discussed in more detail under "*Information about PVO—Operating Model of the Issuer*". The Issuer is also subject to the risk of major external adverse events or other circumstances discussed above under "*Risks Related to PVO's Operations—Major adverse events or circumstances may affect PVO's operations*" and affecting its subsidiaries, associated companies and joint ventures. The Issuer may be requested to provide additional financing to such subsidiaries, associated companies and joint ventures should any such risk materialise, or otherwise, in order to cover any costs that go beyond those allocated to the shareholders pursuant to the articles of association of the relevant companies. In addition, a failure by any other shareholder or shareholders in any of the Mankala companies in which the Issuer owns shares to fulfil its or their respective obligations under the articles of association of the relevant Mankala company or companies could result in liquidity or payment problems for such Mankala company or companies. Although non-defaulting shareholders would have no obligation to fund the defaulting shareholder's or shareholders' portion, liquidity needs and potential insolvency of the relevant Mankala company or companies may require additional financing. Inasmuch as the Issuer has no obligation to inject additional capital or otherwise finance Mankala companies in which it owns shares other than as is set forth in the articles of associations of these companies, no assurance can be given that the Issuer would do so, or that additional financing would be available from other shareholders or from third parties in

the future to finance operations of such subsidiaries, associated companies or joint ventures. Should such a risk materialise, it could result in the insolvency of such subsidiary, associated company or joint venture, and have a material adverse effect on PVO's business and financial position and, thereby, on the Issuer's ability to fulfil its obligations under the Notes issued and the value of the Notes, and could ultimately result in the insolvency of the Issuer.

The Issuer manages its liquidity by invoicing its shareholders on a monthly basis for its fixed and variable costs, as specified in its Articles of Association (see "*Information about PVO—Operating Model of the Issuer*"). In addition, the Issuer manages these risks through a combination of cash positions and committed credit facility agreements with banks. However, the Issuer's liquidity and financial position are materially dependent on its shareholders making timely payments and no assurance can be given that the failure of a shareholder to make such payments would not adversely affect the Issuer's liquidity and financial position. In addition to the monthly payments received from its shareholders and any payments pursuant to any specific undertakings by the shareholders, the Issuer finances its operations, including investments, through various types of loan financing from third parties, and has also received equity capital injections from its shareholders in the past (see "*Information about PVO—Operating Model of the Issuer*"). Other than the existing EUR 90 million shareholder loan commitment signed on 1 March 2018, the shareholders of the Issuer have no obligation to inject additional capital or otherwise finance the Issuer beyond payment for the Issuer's fixed and variable costs, as set forth in the Articles of Association of the Issuer, and no assurance can be given that they would provide such additional capital or other financing or that additional financing would be available from third parties in the future to finance the Issuer's operations, including investments, or to refinance the Issuer's debt, if required, which could have a material adverse effect on the Issuer's business and financial position and, thereby, on the Issuer's ability to fulfil its obligations under the Notes and the value of the Notes, and could ultimately result in the insolvency of the Issuer.

#### ***PVO is exposed to interest rate risks***

Changes in rates of interest rates on interest-bearing receivables and liabilities create an interest rate risk. The interest rate risk in the loan portfolio of the PVO Group is managed by changing the interest rate period and the duration. The interest rate period of loan portfolios may be changed with fixed-rate loans, interest-rate swaps, forward-rate agreements and interest rate cap and floor agreements. Subsidiaries' interest rate hedges are made so that the counterparty is always the Issuer, which then enters into a corresponding contract with a bank.

Although the Issuer manages interest rate risks within target levels, there can be no assurance that the Issuer will be able to manage such interest rate risk successfully in the future. A failure to manage interest rate risk may have an adverse effect on the PVO Group's financial position and, thereby, on the Issuer's ability to fulfil its obligations under the Notes issued as well as the value of the Notes, and could ultimately result in the insolvency of the Issuer.

#### ***PVO is exposed to counterparty and credit risk through its financing activities***

PVO's financing activities lead to contractual arrangements with various financing institutions which expose PVO to counterparty risks. Credit risk exposures relating to financial derivative instruments are often volatile. According to the PVO Group's policy, financial contracts are limited to those with high-credit-quality counterparties active on the financial markets. Credit risk exposures are spread across a wide range of financial institutions. The Issuer monitors credit and counterparty exposure to ensure that the risks are maintained at an acceptable level.

However, there can be no assurance that PVO will not sustain losses as a result of default, litigation or other actions by one or more of its counterparties in the future. The occurrence of loss may have an adverse effect on PVO's financial position and, thereby, on the Issuer's ability to fulfil its obligations under the Notes issued as well as the value of the Notes.

#### ***The Issuer's financial position is materially dependent on its shareholders making timely payments to the Issuer***

The Issuer's operating model is such that it receives regular monthly payments from its shareholders for the coverage of fixed and variable costs in accordance with its Articles of Association (see "*Information about PVO—Operating Model of the Issuer*"). A failure by a shareholder to meet its payment obligations would entitle the Issuer to cut off that shareholder's supply of energy.

The Issuer has never experienced any material payment delays from its shareholders. However, as the Issuer's financial position is materially dependent on its shareholders making timely payments to the Issuer, there can be no assurance that the inability of a shareholder to meet its payment obligations towards the Issuer would not adversely affect the Issuer's liquidity and financial position. Consequently, if the financial position of one or more shareholders of the Issuer is adversely affected, the amounts payable to the Issuer by its shareholders increase or there is any change in the identity of the shareholders, this could adversely affect the business and financial position of the Issuer and adversely affect the Issuer's ability to fulfil its obligations under the Notes issued and the value of the Notes.

## **Risks Related to the Notes**

### ***The Notes may not be a suitable investment for all investors***

Each prospective investor in the Notes must determine, based on its own independent review and such professional advice as it deems appropriate under the circumstances, that investment in the Notes is consistent with its financial needs, objectives and condition, complies and is consistent with the investment policies, guidelines and restrictions applicable to it and is a fit, proper and suitable investment for it, notwithstanding the material risks inherent in investing in or holding the Notes.

A prospective investor should:

- (i) have sufficient knowledge and experience to make a meaningful evaluation of the Notes, the merits and risks of investing in the Notes and the information contained or referred to in this Listing Prospectus;
- (ii) have access to, and knowledge of, appropriate analytical tools to evaluate, in the context of its particular financial situation, an investment in the Notes and the effect that the Notes can have on its overall investment portfolio;
- (iii) have sufficient financial resources and liquidity to bear all of the risks of an investment in the Notes;
- (iv) understand fully the terms of the Notes and be familiar with the behaviour of any relevant financial markets; and
- (v) be able to evaluate (either on its own or with the help of its financial adviser) possible scenarios for economic, interest rate, and other factors that may affect its investment and its ability to bear the applicable risks.

### ***The Issuer's ability to make payments under the Notes is effectively subordinated to any liabilities of its subsidiaries, associates and joint ventures***

The Issuer is the ultimate parent of the PVO Group. The Issuer does not have any operating assets and it procures energy for its shareholders at cost-price principle from its subsidiaries, associated companies and joint ventures. Inasmuch as none of these subsidiaries, associated companies or joint ventures has guaranteed any liabilities of the Issuer (including the Notes), neither the Issuer nor holders of Notes will have any direct claim on the Issuer's subsidiaries' cash flows or assets. In the event of a bankruptcy, liquidation or reorganisation of any of the Issuer's subsidiaries, associated companies or joint ventures, their creditors will generally be entitled to payment of their claims from the cash flows and assets of those subsidiaries, associated companies or joint ventures before any cash flows or assets are made available for distribution to the Issuer as a shareholder. See "*Information about PVO—Financing Agreements and Liquidity Position*" for more information on the indebtedness of the Issuer's subsidiaries.

### ***Neither the Issuer nor the Notes are rated***

The Issuer has no ratings solicited by it. Further, the Notes are currently not rated by any rating agency. Accordingly, investors are not able to refer to any independent credit rating when evaluating factors that may affect the value of the Notes.

### ***Investors are exposed to credit risk in respect of the Issuer and investors may lose their investment in the Notes***

Investors in the Notes carry a credit risk relating to the Issuer. The investor's right to receive payment under the Terms and Conditions is, therefore, dependent on the Issuer's ability to meet its payment obligations. The Issuer's financial position is affected by several factors of which some have been mentioned above. An investor is always solely responsible for the economic consequences of his/her/its investment decisions.

An increased credit risk may cause the market to charge the Notes a higher risk premium, which could affect the Notes' value negatively. Another aspect of the credit risk is that a deteriorating financial position of the Issuer may reduce the Issuer's possibility to receive debt financing at the time of the maturity of the Notes and such debt financing might be needed for the Issuer to be able to meet its payment obligations under the Notes. In addition, should the Issuer become insolvent during the term of the Notes, an investor may forfeit interest payable on, and the principal amount of, the Notes in whole or in part.

### ***Since the Notes bear a fixed interest rate, their price may fall as a result of changes in the interest rates***

The Notes bear interest on their outstanding principal at a fixed interest rate. A holder of a security with a fixed interest rate is exposed to the risk that the price of such security could fall as a result of changes in the market interest rate. Market interest rates follow the changes in general economic conditions, and are affected by, among many other things, demand and supply for money, liquidity, inflation rate, economic growth, central banks' benchmark rates, implied future rates, and changes and expectations related thereto.



While the nominal compensation rate of a security with a fixed interest rate is fixed during the term of such security or during a certain period of time, current interest rates on capital markets (market interest rates) typically change continuously. In case market interest rates increase, the market price of such a security typically falls. If market interest rates fall, the price of a security with a fixed interest rate typically increases. Consequently, the Noteholders should be aware that movements of market interest rates may result in a material decline in the market price of the Notes and can lead to losses for the Noteholders if they sell the Notes. Further, the past performance of the Notes is not an indication of their future performance.

***The Notes carry no voting rights at the Issuer's General Meetings of Shareholders***

The Notes carry no voting rights with respect to the general meetings of shareholders (the “**General Meeting of Shareholders**”) of the Issuer. Consequently, in the Issuer's General Meetings of Shareholders the holders of Notes cannot influence any decisions by the Issuer to redeem the Notes or any decisions by the Issuer's shareholders concerning, for instance, the capital structure of the Issuer, which could affect the Issuer's ability to make payments under the Notes.

***The Notes constitute unsecured obligations of the Issuer***

The Notes constitute direct, unconditional, unsecured and unsubordinated obligations of the Issuer. The Notes are not guaranteed by any person or entity. No one other than the Issuer will accept any liability in respect of any failure by the Issuer to pay any amount due under the Notes.

This means that in the event of bankruptcy, re-organisation or winding-up of the Issuer, the Noteholders normally receive payment after any priority creditors have been fully paid. Accordingly, the prospects of the Issuer may adversely affect the liquidity and the market price of the Notes and may increase the risk that the Noteholders will not receive prompt and full payment, when due, for interest, principal and/or any other amounts payable to the Noteholders pursuant to the Notes from time to time.

***The Issuer using its right or being obligated to redeem and purchase the Notes prior to maturity may have an adverse effect on the Issuer and on any Notes outstanding***

As specified in the Terms and Conditions, the Noteholders are entitled to demand premature repayment of the Notes in the situations specified in Condition 8 (*Change of Control*), Condition 10 (*Excess Secured Indebtedness*) and Condition 12 (*Events of Default*) of the Terms and Conditions. Such premature repayment may have an adverse effect on the Issuer's financial position and prospects and, thereby, on the Issuer's ability to fulfil its obligations under the Notes towards such Noteholders who elect not to exercise their right to have their Notes prematurely repaid as well as on the market price and value of such Notes.

In addition, as specified in the Terms and Conditions, the Issuer may at any time purchase the Notes in any manner and at any price prior to maturity. Only if such purchases are made by tender, such tender must be available to all Noteholders alike. The Issuer is entitled to cancel, dispose of or hold the purchased Notes at its discretion. Consequently, a Noteholder offering Notes to the Issuer in connection with such purchases may not receive the full invested amount. Furthermore, a Noteholder may not have the possibility to participate in such purchases. The purchases – whether by tender or otherwise – may have a material adverse effect on such Noteholders who do not participate in the purchases as well as on the market price and value of such Notes.

Furthermore, in case more than seventy-five (75) percent of the aggregate volume of the Notes has been repaid pursuant to a demand by the Noteholders based on a violation of the Excess Secured Indebtedness or a Change of Control of the Issuer, the Issuer is entitled to prepay also the remaining outstanding Notes by notifying the Noteholders of such prepayment. It should be noted, that such early prepayment may not be initiated by the Issuer in case of an Event of Default. Such early prepayment initiated by the Issuer may incur financial losses or damage, among other things, to such holders of the Notes who had prepared themselves to have the amount of the Notes invested until the contractual final maturity of the Notes.

In addition, as specified in the Condition 7.2 (*Voluntary Total Redemption (Call Option)*) of the Terms and Conditions, the Notes contain an optional redemption feature, which is likely to limit their market value. During any period when the Issuer may elect to redeem the Notes, the market value of the Notes generally will not rise substantially above the price at which they can be redeemed. This may also be true prior to any redemption period.

The Issuer may be expected to redeem the Notes when its cost of borrowing is lower than the interest rate on the Notes. At those times, an investor generally would not be able to reinvest the redemption proceeds at an effective interest rate as high as the interest rate on the Notes being redeemed and may only be able to do so at a significantly lower rate. Potential investors should consider reinvestment risk in light of other investments available at that time.

***The Issuer is not obliged to compensate for withholding tax or similar on the Notes***

In the event any withholding tax, public levy or similar is being imposed in respect of payments to Noteholders on amounts due pursuant to the Notes, the Issuer is not obliged to gross-up or otherwise compensate the Noteholders for the lesser amounts the Noteholders will receive as a result of the impositions of withholding tax or similar. Furthermore, the Noteholders do not have any right to premature redemption of the Notes based on the same.

***The completion of transactions relating to the Notes is dependent on Euroclear Finland's operations and systems***

The Notes are issued in the book-entry securities system of Euroclear Finland. Pursuant to the Act on the Book-Entry System and Clearing and Settlement (348/2017, as amended; *Fi: laki arvo-osuusjärjestelmästä ja selvitystoiminnasta*), the Notes will not be evidenced by any physical note or document of title other than statements of account made by Euroclear Finland or its account operator. The Notes are dematerialised securities and title to the Notes is recorded and transfers of the Notes are perfected only through the relevant entries in the book-entry system and registers maintained by Euroclear Finland and its account operators. Therefore, timely and successful completion of transactions relating to the Notes, including but not limited to transfers of, and payments made under, the Notes, depend on the book-entry securities system being operational and that the relevant parties, including but not limited to the payment transfer bank and the account operators of the Noteholders, are functioning when transactions are executed. Any malfunction or delay in the book-entry securities system or any failure by any relevant party may result in the transaction involving the Notes not taking place as expected or being delayed, which may cause financial losses or damage to the Noteholders whose rights depended on the timely and successful completion of the transaction.

The Issuer or any other third party will not assume any responsibility for the timely and full functionality of the book-entry securities system. Payments under the Notes will be made in accordance with the laws governing the book-entry securities system, the rules of Euroclear Finland and the Terms and Conditions. For purposes of payments under the Notes, it is the responsibility of each Noteholder to maintain with its respective book-entry account operator up to date information on applicable bank accounts.

***Legislative amendments may take place during the term of the Notes***

The Notes are governed by the laws of Finland, as in force from time to time. Finnish laws and regulations, including, but not limited to, tax laws and regulations, governing the Notes may change during the term of the Notes and new judicial decisions can be given and new administrative practices can be implemented. The Issuer makes no representations as to the effect of any such changes of laws or regulations, or new judicial decisions or administrative practices after the date of this Listing Prospectus.

***The Issuer may be able to merge, demerge, effect asset sales or otherwise effect significant transactions that may have a material adverse effect on the Notes and the Noteholders***

The Issuer and its subsidiaries, joint ventures and associated companies may be able to merge, demerge, effect asset sales or otherwise effect significant transactions that could materially alter the Issuer's existence, legal structure of organisation or regulatory regime and/or its composition and business. In the event the Issuer was to enter into any such transaction, the Issuer's ability to fulfil its obligations under the Notes as well as the market price and value of the Notes may be materially and adversely affected.

***The Issuer may issue additional debt and/or grant security***

Except for as set out in Condition 9 (*Negative Pledge*) and Condition 10 (*Excess Secured Indebtedness*) of the Terms and Conditions, the Issuer is not prohibited from issuing further notes or incurring other debt ranking *pari passu* or senior to the Notes or restricted from granting any security on any existing or future debts. Such issuance or incurrence of further debt or granting of security may reduce the amount recoverable by the Noteholders upon the winding-up or insolvency of the Issuer.

***The Notes contain no covenants on the Issuer's financial standing or operations***

The Terms and Conditions do not contain any covenants concerning the Issuer's financial standing or operations except as set forth in Condition 8 (*Change of Control*) and Condition 12 (*Events of Default*) of the Terms and Conditions, which grant the Noteholders the right of repayment of the Notes in certain limited circumstances.

***Amendments to the Terms and Conditions bind all Noteholders***

The Terms and Conditions may be amended in certain circumstances with the required consent of a defined majority of the Noteholders. The Terms and Conditions contain provisions for the Noteholders to call and attend meetings and arrange procedures in writing to consider and vote upon matters affecting their interests generally. Resolutions passed at such meetings may bind all Noteholders, including those who did not attend and vote at the relevant meeting and those who

voted in a manner contrary to the majority. This may incur financial losses, among other things, to all Noteholders, including those who did not attend and vote at the relevant meeting or participate in the procedure in writing and those who voted in a manner contrary to the majority.

***Legal investment considerations may restrict certain investments***

The investment activities of the Noteholders may be subject to legal investment laws and regulations, or review or regulation by certain authorities. Each potential Noteholder should consult its legal advisers to determine whether and to what extent (i) Notes are legal investments for it, (ii) Notes can be used as collateral for various types of borrowing and (iii) other restrictions apply to its purchase or pledge of any Notes. Financial institutions should consult their legal advisors or the appropriate regulators to determine the appropriate treatment of Notes under any applicable risk-based capital or similar rules.

***The right to receive payments under the Notes is subject to time limitations***

Under the Terms and Conditions, if any payment under the Notes has not been claimed by the respective Noteholder within three years from the relevant due date thereof, the right to such payment shall become permanently forfeited. Such forfeiture to receive payment may cause financial losses to such Noteholders who have not claimed payment under the Notes within the time limit of three years.

***There is currently no public market for the Notes and if an active trading market for the Notes does not develop or is not maintained, it could have a material adverse effect on the market price of the Notes***

The Notes constitute a new issue of securities by the Issuer. Prior to the contemplated listing of the Notes on Nasdaq Helsinki, there is no public market for the Notes. Although an application will be made to list the Notes on Nasdaq Helsinki, no assurance can be given that such application will be approved within on time or at all. In addition, the listing of the Notes will not guarantee that a liquid public market for the Notes will develop, and even if such a market were to develop, neither the Issuer nor the Lead Managers are under any obligation to maintain such market. The liquidity and the market prices of the Notes can be expected to vary with changes in market and economic conditions, the financial position and prospects of the Issuer and many other factors that generally influence the market prices of securities. Such factors may significantly affect the liquidity and the market prices of the Notes, which may trade at a discount to the price at which the Noteholders purchased the Notes.

If an active trading market for the Notes does not develop or is not maintained, it could have a material adverse effect on the market price of the Notes. Further, Noteholders may not be able to sell their Notes at all or at prices that will provide them with a yield comparable to similar investments that have a developed secondary market. Moreover, if additional and competing products are introduced in the markets, it could have a material adverse effect on the market price of the Notes.

## GENERAL INFORMATION

### The Issuer and Certain Other Parties

#### *Issuer*

Pohjolan Voima Oyj  
Töölönkatu 4  
FI-00100 Helsinki  
Finland

#### *Lead Managers*

OP Corporate Bank plc  
Gebhardin aukio 1  
FI-00510 Helsinki  
Finland

Svenska Handelsbanken AB (publ)  
Blasieholmstorg 11  
SE-106 70 Stockholm  
Sweden

#### *Legal Advisor to the Issuer*

White & Case LLP  
Aleksanterinkatu 44  
FI-00100 Helsinki  
Finland

#### *Auditor of the Issuer*

PricewaterhouseCoopers Oy  
Authorised Public Accountants  
Itämerentori 2  
FI-00180 Helsinki  
Finland

### Responsibility Statement

This Listing Prospectus has been prepared by the Issuer and the Issuer accepts responsibility regarding the information contained in this Listing Prospectus. To the best knowledge of the Issuer, having taken all reasonable care to ensure that such is the case, the information contained in this Listing Prospectus is in accordance with the facts and contains no omission likely to affect its import.

### Auditors of the Issuer

The Annual General Meeting of Shareholders of the Issuer held on 21 March 2019 elected as its auditor PricewaterhouseCoopers Oy. PricewaterhouseCoopers Oy designated Authorised Public Accountant Jouko Malinen as the auditor with principal responsibility. The Issuer's consolidated financial statements as of and for the year ended 31 December 2018 and as of and for the year ended 31 December 2017 have been audited by PricewaterhouseCoopers Oy with Authorised Public Accountant Jouko Malinen as the auditor with principal responsibility.

### Financial Information

The Issuer's audited consolidated financial statements as of and for the years ended 31 December 2018 and 2017 have been incorporated by reference into this Listing Prospectus. See "*Documents Incorporated by Reference*". The Issuer's audited consolidated financial statements have been prepared in accordance with the IFRS as adopted by the EU. Effective as of 1 January 2018, the Issuer has adopted "*IFRS 9 – Financial instruments*" and "*IFRS 15 – Revenue from contracts with customers*" standards. The adoption of "*IFRS 9 – Financial instruments*" resulted in classification changes in financial instruments, but no restatements to the figures. The adoption of "*IFRS 15 – Revenue from contracts with customers*" had no impact on the Issuer's revenue recognition. Effective as of 1 January 2019, the Issuer has adopted the "*IFRS 16 – Leases*" standard. The Issuer estimates that as a result of the adoption, the Issuer will recognise approximately EUR 10.6 million of right of use assets and lease liabilities and the effect on profit after tax will be EUR 0.1 million negative.

Financial information set forth in this Listing Prospectus has been rounded. Accordingly, in certain instances, the sum of the numbers in a column or row may not conform exactly to the total figure given for that column or row.

### **Alternative Performance Measures**

The Issuer presents in this Listing Prospectus an alternative performance measure of historical financial performance and financial position, which, in accordance with the “*Alternative Performance Measures*” guidance issued by the European Securities and Markets Authority (“ESMA”), is not accounting measure defined or specified in IFRS (the “**Alternative Performance Measure**”). Such Alternative Performance Measure is equity ratio, which is defined as total equity divided by total equity and liabilities.

The Issuer presents Alternative Performance Measure as additional information to measures presented in the consolidated statement of comprehensive income, consolidated statement of financial position and consolidated statement of cash flows prepared in accordance with IFRS. In Issuer’s view, equity ratio provides significant and useful information about the financial position of the Issuer for the management, investors, securities market analysts and other parties.

Alternative Performance Measures should not be viewed in isolation or as a substitute to the measures under IFRS. All companies do not calculate Alternative Performance Measures in a uniform way, and, therefore, the Alternative Performance Measure presented in this Listing Prospectus may not be comparable with similarly named measures presented by other companies.

The Alternative Performance Measure is unaudited.

### **Special Cautionary Notice Regarding Forward-looking Statements**

Certain statements in this Listing Prospectus, including but not limited to certain statements set forth under the captions “*Risk Factors*” and “*Information about PVO*”, are based on the beliefs of the Issuer’s management as well as assumptions made by and information currently available to it, and such statements may constitute forward-looking statements. The words “believe”, “expect”, “anticipate”, “intend” or “plan” and similar expressions identify such forward-looking statements.

Such forward-looking statements involve known and unknown risks, uncertainties and other important factors that could cause the actual results, performance or achievements of the Issuer, or industry results, to differ materially from any future results, performance or achievements expressed or implied by such forward-looking statements. Such risks, uncertainties and other important factors include, among other things, the risks described in “*Risk Factors*”. The forward-looking statements are not guarantees of the future operational or financial performance of the Issuer. In addition to factors that may be described elsewhere in this Listing Prospectus, the factors discussed under “*Risk Factors*” could cause the Issuer’s actual results of operations or its financial position to differ materially from those expressed in any forward-looking statement. Should one or more of these risks or uncertainties materialise, or should any underlying assumptions prove to be incorrect, the Issuer’s actual results of operations, its financial position or its ability to fulfil its obligations under the Notes could differ materially from those described herein as anticipated, believed, estimated or expected. The Issuer does not intend and does not assume any obligation to update any forward-looking statements contained herein unless required by applicable legislation. For additional information that could affect the results, performance, achievements or financial position of the Issuer, see “*Risk Factors*”.

### **Market and Industry Information**

This Listing Prospectus contains market and industry information from third parties. Information on electricity prices is derived from information made public by Nord Pool Spot AS, the Nordic electricity exchange (“**Nord Pool**”), information on electricity consumption, production and import is from the monthly electricity statistics provided by the Finnish Energy (*Fi: Energiateollisuus ry*) and information on emission allowance prices are from Intercontinental Exchange Inc. Information on Finnish electricity production capacity is derived from information made public by Finnish Energy Authority. Any other estimates with respect to market and industry information referred to in this Listing Prospectus are based upon the estimates of the management of the Issuer, unless otherwise indicated. The Issuer disclaims any responsibility for the accuracy or the completeness of these third-party market estimates. This information has been accurately reproduced in this Listing Prospectus and as far as the Issuer is aware and is able to ascertain from information published by these sources, no facts have been omitted which would render the reproduced information inaccurate or misleading.

### **Other Information Derived from Third Party Sources**

This Listing Prospectus contains information about a joint venture of the Issuer, TVO. The information on TVO has been derived from information made public by TVO, including TVO’s annual report for the year ended 31 December 2018, interim report for the three months ended 31 March 2019 and the Base Prospectus relating to TVO’s Euro Medium Term Note programme, dated 29 June 2018 (as supplemented on 6 November 2018).

While the Issuer has accurately reproduced such third party information, the Issuer has not verified the accuracy of such information, market data or other information on which third parties have based their studies and cannot give any assurances as to the appropriateness of such information. As far as the Issuer is aware, and is able to ascertain from information published by these third parties, no facts have been omitted which would render the reproduced information inaccurate or misleading.

### **No Incorporation of Website Information**

For the avoidance of doubt, other than the parts of the documents incorporated by reference and specified in “*Documents Incorporated by Reference*”, the contents of the Issuer’s website or any other website do not form a part of this Listing Prospectus, and prospective investors should not rely on such information in making their decision to invest in the Notes.

### **Notice to Investors**

Each Lead Manager has represented, warranted and undertaken, and each further Lead Manager appointed will be required to represent, warrant and undertake, that it has complied and will comply with all applicable laws and regulations in each country or jurisdiction in or from which it purchases, offers, sells or delivers Notes or possesses, distributes or publishes this Listing Prospectus or any related offering material, in all cases at its own expense. Other persons into whose hands this Listing Prospectus comes are required by the Issuer and the Lead Manager to comply with all applicable laws and regulations in each country or jurisdiction in or from which they purchase, offer, sell or deliver Notes or possess, distribute or publish this Listing Prospectus or any related offering material, in all cases at their own expense.

### ***Notice to Prospective Investors in the European Economic Area***

This Listing Prospectus has been prepared on the basis that all offers of the Notes in the EEA will be made pursuant to an exemption under the Prospectus Directive, as implemented in the member states of the EEA, from the requirement to produce a prospectus under the Prospectus Directive for offers of securities. Accordingly, any person making or intending to make any offer of the Notes within the EEA should only do so in circumstances in which no obligation arises for the Issuer or the Lead Managers to publish a prospectus under the Prospectus Directive for such offer. Neither the Issuer nor the Lead Managers have authorised, nor do they authorise, the making of any offer of securities through any financial intermediary. In relation to each Member State of the EEA which has implemented the Prospectus Directive (each, a “**Relevant Member State**”) an offer to the public of any Notes may not be made in that Relevant Member State except that offers to the public in that Relevant Member State may be made pursuant to the following exemptions under the Prospectus Directive, if they have been implemented in that Relevant Member State:

- (a) to legal entities which are qualified investors as defined under the Prospectus Directive;
- (b) to fewer than 150 natural or legal persons (other than qualified investors as defined in the Prospectus Directive), as permitted under the Prospectus Directive; or
- (c) in any other circumstances falling within Article 3(2) of the Prospectus Directive,

provided that no such offer of Notes shall result in a requirement for the Issuer or the Lead Managers to publish a prospectus pursuant to Article 3 of the Prospectus Directive or supplement a prospectus pursuant to Article 16 of the Prospectus Directive.

For the purposes of this provision, the expression an “offer to the public” in relation to any Notes in any Relevant Member State means the communication in any form and by any means of sufficient information on the terms of the offer and any Notes to be offered so as to enable an investor to decide to purchase any Notes, as the same may be varied in that Member State by any measure implementing the Prospectus Directive in that Member State.

### ***Notice to Prospective Investors in the United Kingdom***

This Listing Prospectus does not constitute an offer to the public and no prospectus has been or will be approved in the United Kingdom in respect of the Notes. Therefore, in the United Kingdom, this Listing Prospectus may only be communicated to persons in circumstances where the provisions of section 21(1) of the Financial Services and Markets Act 2000, as amended, do not apply to the Issuer and is solely directed at persons in the United Kingdom who (a) have professional experience in matters relating to investments falling within Article 19(5) of the Order or (b) persons falling within Article 49(2)(a) to (d) of the Order, or other persons to whom it may be lawfully communicated (all such persons together being referred to as “relevant persons”). This Listing Prospectus is directed only at relevant persons and any person who is not a relevant person must not act or rely on this document or any of its contents.

### ***Notice to Prospective Investors in Switzerland***

This Listing Prospectus is not intended to constitute an offer or solicitation to purchase or invest in the Notes described herein. The Notes may not be publicly offered, sold or advertised, directly or indirectly, in, into or from Switzerland except in circumstances that will not result in the offer of the Notes being a public offering in Switzerland within the meaning of the Swiss Code of Obligations and will not be listed on the SIX Swiss Exchange Ltd. (“**SIX Swiss Exchange**”) or on any other stock exchange or regulated trading facility in Switzerland. Neither this Listing Prospectus nor any other offering or marketing material relating to the Notes constitutes a prospectus as such term is understood pursuant to Article 652a or Article 1156 of the Swiss Code of Obligations or a listing prospectus within the meaning of the listing rules of the SIX Swiss Exchange or any other regulated trading facility in Switzerland, and neither this Listing Prospectus nor any other offering or marketing material relating to the Notes may be publicly distributed or otherwise made publicly available in Switzerland. The Issuer is not authorised by or registered with the Swiss Financial Market Supervisory Authority (“**FINMA**”) as a foreign collective investment scheme. Therefore, investors do not benefit from protection under the Swiss collective investment schemes law or supervision by FINMA.

### ***Notice to Prospective Investors in the United States***

The Notes have not been, and will not be, registered under the Securities Act and the Notes may not be offered or sold within the United States or to, or for the account or benefit of, U.S. persons. Terms used in this paragraph and not otherwise defined herein the preceding sentence have the meanings given to them by Regulation S. In addition, until 40 days after the commencement of the offering of the Notes, an offer or sale of the Notes within the United States by a dealer (whether or not participating in the Offering) may violate the registration requirements of the Securities Act.

## INFORMATION ABOUT PVO

### General Information about the Issuer

The business name of the Issuer is Pohjolan Voima Oyj. The Issuer is a public limited liability company incorporated on 10 September 1943. It is organised under the laws of Finland and is registered in the trade register maintained by the Finnish Patent and Registration Office (the “**Finnish Trade Register**”) under the business identity code 0210161-4. The Issuer is domiciled in Helsinki and has its registered address at Töölönkatu 4, FI-00100 Helsinki, Finland and telephone number +358 10 478 5000. The financial year of the Issuer is 1 January – 31 December.

The Issuer’s principal object, as set out in Article 2 of its Articles of Association, is procurement of energy at cost price to its shareholders who consist mainly of Finnish industrial as well as private and municipal energy companies. As of the date of this Listing Prospectus, the Issuer’s share capital amounted to EUR 65,229,535.96, consisting of 32,509,113 shares and of 14 share series. The shares of the Issuer have no par value.

### History and Development of the Issuer

The Issuer was established in 1943 as a result of the Issuer’s founders needing electricity for their operations. PVO started with hydropower and expanded into thermal power and, at the end of the 1970s, into nuclear power through TVO. The PVO Group has grown into an energy group of companies with diversified production structure.

The Issuer aims to be the most competitive large-scale energy producer for its owners. The Issuer’s focus is on hydropower, thermal power and nuclear power and the share of carbon-neutral energy sources in the Issuer’s electricity production amounted to 87 percent in 2018 (2017: 92 percent). The Issuer’s mission is to strengthen its shareholders’ competitive advantages through joining resources and producing efficient energy services.

### Recent Events

On 15 March 2019, the Issuer paid a total of EUR 14 million in capital distributions to its C-series shareholders. The capital distributions were made from the reserve for invested non-restricted equity of the Issuer.

On 4 April 2019, the Issuer agreed on the arrangement with EPV Energy Ltd to transfer all assets and business operations of Vaskiluodon Voima Oy, a 50 percent-owned joint venture of the Issuer, to wholly-owned subsidiary of EPV Energy Ltd. In accordance with the agreement, the ownership of the assets will transfer 1 January 2023. Vaskiluodon Voima Oy operates a coal-fired CHP plant in Vaskiluoto, Vaasa.

According to a stock exchange release published by TVO on 10 April 2019, the Supplier is expected to update the schedule for OL3 EPR project and deliver a new schedule to TVO by the end of June 2019. Based on the information provided by the Supplier, nuclear fuel will not be loaded to the reactor at least before the end of August 2019.

### Operating Model of the Issuer

The Issuer operates on the Mankala Principle, which is widely applied in the Finnish energy industry. The Mankala Principle is not defined in Finnish legislation or other regulations but is based on the Articles of Association of each company applying the Mankala Principle and, therefore, the detailed operating model under the Mankala Principle, including the provision for coverage of costs by the shareholders, may differ between companies applying the Mankala Principle. The cost-price principle applicable to the Issuer is described in Article 4 of the Articles of Association of the Issuer. Pursuant to the Articles of Association, amending Article 4 of the Articles of Association would require unanimous shareholders’ approval, except for decisions to establish a new series of shares or to remove an existing series of shares.

According to the Issuer’s Articles of Association, each of the shareholders of each series of the Issuer’s shares is entitled to receive energy available at each particular moment procured by the Issuer from energy acquisition resources (subsidiaries, associated companies, joint ventures, specific power plant units, specific energy generation methods or in replacement thereof), as specified in the Articles of Association of the Issuer, in proportion to its shareholding of each of the series of the Issuer’s shares, and each shareholder of each series of the Issuer’s shares is, other than in exceptional circumstances, such as those described in “*Risk Factors—Risks related to PVO’s Operations—Major adverse events or circumstances may affect PVO’s operations*”, responsible for the fixed costs of energy procured by the Issuer in this manner in proportion to its shareholding in each of the series of the Issuer’s shares, irrespective of whether or not the share of capacity and energy has been used, and for the variable costs in the proportion to the amount of energy taken, taking into account the variable costs of each power acquisition resource separately.

The Issuer is a public limited liability company and its shareholders have no personal liability for the obligations of the Issuer. Pursuant to an agreement entered into by the shareholders of the Issuer (the “**Shareholders’ Agreement**”), the Issuer has the sole right to call upon the responsibilities of the shareholders in accordance with Article 4 of the Issuer’s Articles of Association and the shareholders of the Issuer shall have no liability towards any other party in relation thereto.



In accordance with the Issuer's Articles of Association, each shareholder's share of liability for the costs towards the Issuer will always be limited to the amount corresponding to the proportion of its shareholding to all shares belonging to the same series. Furthermore, the failure of any other shareholder to satisfy its responsibilities for costs in proportion to its shareholding shall not increase any non-defaulting shareholder's liability based on its shareholding. The shareholders are not liable for any costs other than the costs defined in Article 4 of the Articles of Association, unless otherwise agreed in writing.

In practice, fixed and variable costs are collected monthly in arrears from the shareholders of the Issuer. Shareholders' payment for electricity consists of normal operating costs (fixed and variable), financial expenses (interest and other financial costs, net of financial income) as well as depreciation and amortisation. Of such payments, the amount corresponding to the non-cash items, such as depreciation and amortisations (net of capital expenditures), is available to amortise the Issuer's loan portfolio. A shareholder could buy less electricity than it is entitled to, provided, however, that such a shareholder would still be required to pay for the fixed costs related to such electricity in proportion to its shareholding and the variable costs related to that electricity produced, but not acquired by such shareholder, would not be charged to such shareholder.

In addition to invoicing its shareholders on a monthly basis for fixed and variable costs in accordance with its Articles of Association, the Issuer finances its operations, including investments, through various types of financing from third parties and has also received equity capital injections from its shareholders in the past in relation to commitments received by the Issuer from its shareholders prior to starting new investment projects or, in some cases, also during such investment projects.

Any investments in a power plant unit are, to the extent they meet the relevant criteria for depreciation, initially capitalised by the Issuer or the relevant subsidiary, associated company or joint venture and only invoiced to the shareholders beginning when energy production by such power plant unit commences. Such capitalised investment costs are invoiced to the shareholders of the Issuer over the estimated useful life of the investment project in question or at a faster pace, in each case, as determined by the Board of Directors of the Issuer. See also "*Risk Factors—Risks related to PVO's Operations—Major adverse events or circumstances may affect PVO's operations*".

A prerequisite for the shareholder's right to receive energy is, according to Articles of Association of the Issuer, that it has paid its share of the relevant costs on time. If a shareholder neglects to observe its payment obligation, the Issuer will have the right to immediately cut off the distribution of energy based on the ownership of any series of shares to the shareholder and to relinquish, in accordance with the principles of the Articles of Association, the shareholder's share of energy primarily to the other shareholders of the same series of shares, and secondarily to other shareholders of the Issuer. In accordance with an agreement between the shareholders, the electricity can also be sold to Nord Pool. To date, the Issuer has never experienced any material payment delays by its shareholders.

By applying the cost-price principle, the Issuer supplies energy only to its shareholders and at cost price. Consequently, PVO is not exposed to fluctuations in the market price of energy.

In April 2010, the European Commission received a complaint and a written question from two members of the European Parliament concerning the granting of alleged state aid to a significant number of electricity generators (re: CP344/2009 "Mankala" electricity supply scheme). In June 2010, the Finnish authorities provided the European Commission with their summary of the facts. The Commission requested some further clarification on the Mankala scheme from the Finnish authorities in April 2011. In August 2011, the Finnish authorities responded to this request and were of the opinion that the "Mankala" electricity supply scheme did not constitute alleged state aid under Article 107 paragraph 1 of the Treaty on the Functioning of the EU. In November 2012, the European Commission's Directorate-General for Competition concluded the handling of the complaint submitted to the Commission without any adverse findings for the Issuer or other Finnish energy companies operating pursuant to the Mankala Principle.

## **Organisational Structure**

The Issuer's ownership is divided into 14 different series of shares and each series of shares entitle their owner to the energy procured from a specific acquisition resource as detailed in the Articles of Association of the Issuer. Each shareholder is entitled to the proportionate share of energy in accordance with their proportionate ownership of the specific series of shares.

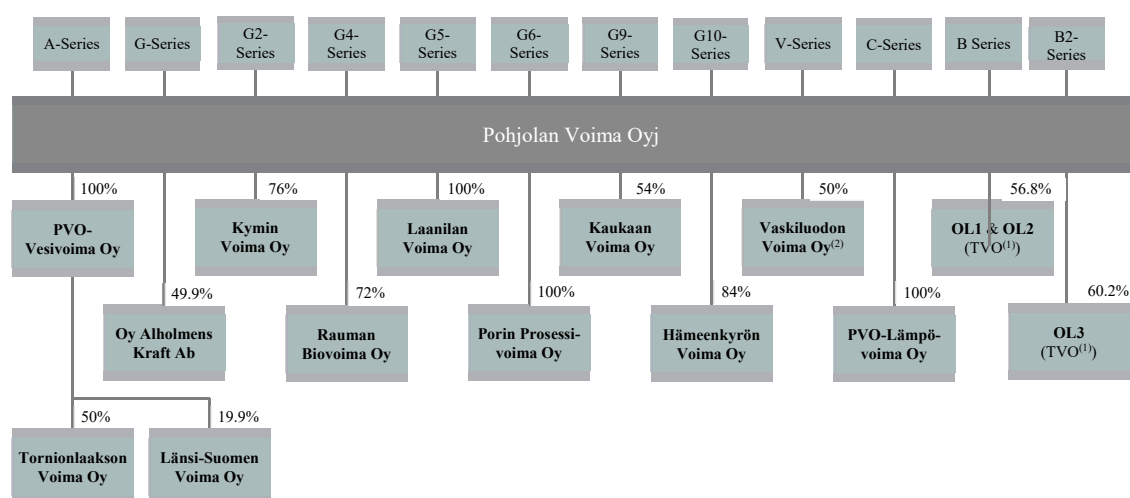
The Issuer is the ultimate parent company of the PVO Group. The Issuer's subsidiaries are those entities over which the Issuer has control. As of the date of this Listing Prospectus, there are 11 subsidiaries in the PVO Group of which seven are active power production companies operating on the Mankala Principle. In addition, the Issuer owns shares in associated companies and joint ventures. Associated companies are all entities over which the Issuer has influence, but not control, generally with a shareholding between 20 percent and 50 percent of the voting rights. As of the date of this Listing Prospectus, the Issuer has four associated companies of which two are power production companies operating on the Mankala Principle.

As of the date of this Listing Prospectus, the PVO Group has three joint ventures of which two are power production companies operating on the Mankala Principle. A joint venture is a contractual joint arrangement whereby the PVO Group together with one or more parties has undertaken an economic activity that is subject to joint control and whereby the PVO Group with other parties has rights to the net assets of the joint arrangement.

The Issuer participates in the management and supervision of its subsidiaries, associated companies and joint ventures through its representatives appointed to the governing bodies of these companies. The Issuer’s General Meeting of Shareholders issues directives to the Board of Directors of the Issuer regarding the composition of the Boards of Directors of the subsidiaries and significant decisions taken by the subsidiaries.

As of the date of this Listing Prospectus, 12 of the Issuer’s 14 share series relate to a specific power production unit. Shares in the B2-series relate to OL3 EPR that is under construction (see “*Information about TVO—TVO’s Operations—Nuclear Operations*”). The shares in the M-series relate to Mussalon Voima Oy, a 100 percent subsidiary of the Issuer that was liquidated in 2017 and the shares in the C2-series relate to Meri-Pori coal-fired power plant through the shares in the C-series of TVO. On 31 December 2018, PVO sold all C-shares of TVO.

The following chart sets forth the Issuer’s share series and respective power production units as of the date of this Listing Prospectus:



(1) See “*Information about TVO—TVO’s Operations—Nuclear Operations*”.  
 (2) See “*Information about PVO—Recent Events*”.

The following table sets forth all of the Issuer’s subsidiaries, associated companies and joint ventures together with respective share series as of the date of this Listing Prospectus:

	<b>Production</b>	<b>The Issuer’s ownership (percent)</b>	<b>The Issuer’s share series entitling to energy<sup>(1)</sup></b>
<b>Parent company and subsidiaries</b>			
Pohjolan Voima Oyj .....	Parent		
PVO-Vesivoima Oy .....	Hydropower	100	A
Hämeenkyrön Voima Oy .....	Thermal Power (CHP)	84	G10
Kaukaan Voima Oy .....	Thermal Power (CHP)	54	G9
Kymin Voima Oy.....	Thermal Power (CHP)	76	G2
Laanilan Voima Oy.....	Thermal Power (CHP)	100	G5
Porin Prosessivoima Oy.....	Thermal Power (CHP)	100	G6
PVO-Lämpövoima Oy <sup>(2)</sup> .....	Thermal Power	100	C
Rauman Biovoima Oy .....	Thermal Power (CHP)	72	G4
PVO Power Management Oy.....	Services company	100	–
PVO Power Services Oy.....	Services company	100	–
Rouhialan Voimansiirto Oy.....	Services company	100	–
<b>Associated companies</b>			
Oy Alholmens Kraft Ab.....	Thermal Power (CHP)	49.9	G
Länsi-Suomen Voima Oy .....	Hydropower	19.9 <sup>(3)</sup>	A
Tornionlaakson Voima Oy.....	Hydropower	50 <sup>(3)</sup>	A
Tahkoluodon Polttoöljy Oy.....	Dormant	32	–
<b>Joint Ventures</b>			
Teollisuuden Voima Oyj <sup>(4)</sup> .....	Nuclear Power	57.1	B (OL1 & OL2), B2 (OL3)
Vaskiluodon Voima Oy <sup>(5)</sup> .....	Thermal Power (CHP)	50	V
Voimalohi Oy .....	Services company	50	–

(1) In addition to those listed below, the Issuer has M share series that related to Mussalon Voima Oy, 100 percent subsidiary of the Issuer that was liquidated in 2017 and C2 share series that relate to Meri-Pori coal-fired power plant through the shares in the C-series of TVO. On 31 December 2018, PVO sold all C-shares of TVO entitling to the power production of the Meri-Pori coal-fired power plant.

(2) PVO-Lämpövoima Oy’s production operations ceased in 2015.

(3) Through PVO-Vesivoima Oy.

(4) Based on the Articles of Association and the shareholders’ agreement of TVO, which form the basis for the decision-making and governance of TVO, as well as the Issuer’s right to appoint board members of TVO, the Issuer has assessed that TVO is a joint venture.

(5) On 4 April 2019, PVO agreed on an arrangement with EPV Energy Ltd to transfer all assets and business operations of Vaskiluodon Voima Oy to EPV Energy Ltd. The ownership of the assets will transfer on 1 January 2023.

For more information on the nuclear operations of TVO, see “*Information about TVO—TVO’s Operations—Nuclear Operations*”.

## Market Information

Finland has the highest per capita electricity consumption in the EU (*source: International Energy Agency, Electricity Information 2018*) owing to its energy-intensive industries (such as steel, manufacturing, pulp and paper) as well as the additional energy expenditures required generally in a cold climate.

In 2018, electricity consumption in Finland was 87.4 terawatt hours (“**TWh**”) (85.5 TWh in 2017). Industrial power consumption increased by 2 percent and the power consumption of other sectors increased by 3 percent from 2017. Finnish electricity production totalled 67.5 TWh (65.0 TWh in 2017). Net imports covered 22.8 percent (19.9 TWh) of the total electricity consumption (24 percent, or 20.4 TWh, in 2017). Most of the imported electricity was imported from Sweden. In 2018, renewable energy sources represented 47 percent and carbon-neutral energy sources 79 percent of the Finnish electricity production.

Finland, Sweden, Norway, Denmark and the Baltic states together comprise a single electricity market, with the price of electricity established by free trading on the electricity exchange, Nord Pool. Nord Pool quotes the day-ahead market price for each hour of a given day, which is calculated on the basis of purchase and sale bids. Due to the constraints in available transmission capacity, the Nord Pool markets are divided into several bidding areas and, thereby, different area prices are established. Finland constitutes one bidding area with individual area price. The system price is calculated based on the sale and purchase orders disregarding the available transmission capacity between the bidding areas in the Nordic market.

The annual average system price was EUR 43.99 in 2018 (EUR 29.41 in 2017) per megawatt hour (“**MWh**”), while the annual average of the Finnish area price was EUR 46.8 in 2018 (EUR 33.19 in 2017) per MWh. The increase in the price of electricity was mainly due to lower water levels in the Nordic countries, higher fuel prices and increased demand.

The EU emission allowances (EUA) price on the Intercontinental Exchange Inc. increased substantially during 2018. As of 31 December 2018, the EUA price was EUR 25.01 compared to EUR 8.14 as of 31 December 2017. The Emissions Trading Directive (“ETS”) (2003/87/EC) and the Decision (2015/1814/EC) were revised with the Directive (2018/410/EC), which reforms the EU emissions trading system (ETS) for the period after 2020. The revised ETS directive aims to enable the EU to reach its target of cutting greenhouse gas emission by at least 40 percent by 2030 and to fulfil its commitments under the Paris Climate Agreement. In the next ETS period, the amount of emission allowances to be issued will decrease by 43 percent in the emissions trading sector by 2030 in comparison with 2005. The amount of emission allowances to be transferred to the market stability reserve will be doubled (24 percent) for five years as of 2019.

According to the national energy and climate strategy, by 2030, as confirmed by the Finnish Parliament in 2017, the proportion of renewable energy out of energy end use will be increased to 50 percent and self-sufficiency in terms of energy end use will be increased to 55 percent by 2030. According to the strategy, the energy use of oil will be reduced by 50 percent by 2030 in comparison with 2005. In 2018, the Government submitted to Parliament a proposal for an act to ban the use coal. According to the government bill, the use of coal in energy production will end on 1 May 2029. The Finnish electricity production subsidy mechanism was reformed in 2018. An auction on 1.4 TWh of renewable electricity, other than hydropower, was carried out in late 2018.

Curbing climate change by reducing greenhouse gas emissions and increasing the amount of carbon sinks were discussed even more after the Intergovernmental Panel on Climate Change (IPCC) published its special report in 2018. It is expected that that emission targets will become stricter after the European Parliament and Finnish Parliamentary elections in 2019. The importance of circular economy is also on the increase.

In November 2016, the European Commission published a clean energy package. Processing of the different parts of the EU Clean Energy Package was nearly completed in 2018. The key issues were the target levels for renewable energy and energy efficiency, the sustainability criteria for biomass and the electricity market. The European Commission has started to reform of the Water Framework Directive with a stakeholder hearing and is expected to issue its proposal in 2020.

The production of weather-dependent wind and solar power continues to grow, which also increases the importance of flexible energy systems and adaptive production, and risk of shortage of power will not disappear in the near future. Discussion regarding the role of hydropower in the electricity production system has increased.

## Business Overview

### Capacity

The PVO Group’s electricity production capacity, including the PVO Group’s share of the associated companies’ and joint ventures’ total capacity, was 2,704 megawatts (“MW”) at the end of 2018 (2017: 2,750 MW). This represented approximately 15 percent of Finland’s total electricity production capacity (17,461 MW). The PVO Group’s electricity production capacity includes the capacity of PVO-Lämpövoima Oy’s condensing power plants (477 MW), which are no longer in production operation, as well as the Issuer’s share of the capacity of Meri-Pori coal-fired power plant (146 MW) that was sold in the end of 2018.

As of 31 December 2018, the combined total process steam and district heat production capacity of the Issuer’s subsidiaries, associated companies and joint ventures was 1,472 MW (2016: 1,563 MW).

	<u>As of 31 December</u>	
	<u>2018</u>	<u>2017</u>
	(MW)	
<b>The PVO Group’s energy production capacity<sup>(1)</sup></b>		
Hydro power .....	449	449
Combined heat and power .....	620	672
Condensing power <sup>(2)</sup> .....	623	623
Nuclear power .....	<u>1,011</u>	<u>1,005</u>
<b>Total electricity production capacity .....</b>	<b><u>2,704</u></b>	<b><u>2,750</u></b>
Process steam and district heat production capacity <sup>(3)</sup> .....	1,472	1,563

(1) Includes the PVO Group companies and the PVO Group’s share of associated companies’ and joint ventures’ total electricity production capacity.

(2) Includes Issuer’s share of Meri-Pori coal-fired power plant (146 MW) through the shares in the C-series of TVO. On 31 December 2018, PVO sold all C-shares of TVO as of 1 January 2019.

(3) Combined total process steam and district heat production capacity of PVO Group companies and associated companies and joint ventures.

### Production

In 2018, the PVO Group’s total electricity supply was 12.5 TWh (11.9 TWh in 2017) of which the electricity produced by subsidiaries, associated companies and joint ventures accounted for 12.0 TWh (11.4 TWh in 2017) and purchases from the

Nordic electricity markets 0.5 TWh (0.5 TWh in 2017). The Issuer supplied 11.6 TWh (10.9 TWh in 2017) to its shareholders and its subsidiaries supplied 0.4 TWh (0.5 TWh in 2017) to their other shareholders. The PVO Group's process steam and district heat deliveries were 4.4 TWh (4.5 TWh in 2017).

In 2018, hydropower accounted for 1.5 TWh (1.8 TWh in 2017) of the PVO Group's total electricity supply. A total of 2.1 TWh (1.9 TWh in 2017) of electricity was supplied by the PVO Group's CHP plants and 0.4 TWh (0.1 TWh in 2017) by condensing power plants. TVO's Olkiluoto nuclear power plants generated a total of 14.1 TWh (13.4 TWh in 2017) of electricity in 2018, of which the Issuer obtained, and supplied to its shareholders, 8.0 TWh (7.6 TWh in 2017) in accordance with its shareholding in TVO.

	<b>For the year ended 31 December</b>	
	<b>2018</b>	<b>2017</b>
	<b>(TWh)</b>	
<b>Energy supply of the PVO Group</b>		
Nuclear power.....	8.0	7.6
Hydro power.....	1.5	1.8
Combined heat and power.....	2.1	1.9
Condensing power.....	0.4	0.1
Purchases.....	<u>0.5</u>	<u>0.5</u>
<b>Total</b> .....	<b><u>12.5</u></b>	<b><u>11.9</u></b>
Of which to the Issuer's shareholders.....	11.6	10.9
Process steam and district heat supply.....	4.4	4.5

## Hydropower

Hydropower is important as balancing power in meeting the difference between electricity consumption and production. Hydropower plants have a long operating life and they generate renewable and emission-free electricity. The Issuer procures hydropower from its wholly-owned subsidiary PVO-Vesivoima Oy.

PVO-Vesivoima Oy operates eight wholly-owned hydropower plants in Finland; five in the river Iijoki, two in the river Kemijoki and one in the river Kokemäenjoki. In addition, PVO-Vesivoima Oy is a shareholder in four other hydropower plants; three in the river Tengeliönjoki operated by Tornionlaakson Voima Oy (50 percent share) and one in the river Kokemäenjoki operated by Länsi-Suomen Voima Oy (19.9 percent share).

As of 31 December 2018, the total output capacity of these 12 hydropower plants was 541 MW, of which PVO-Vesivoima Oy's share was 449 MW representing approximately 14 percent of the total hydropower capacity in Finland (approximately 3,203 MW). In 2018, PVO-Vesivoima Oy produced a total of 1.5 TWh (2017: 1.8 TWh, 2016: 2.0 TWh) of electricity. The hydropower production decreased due to dry hydrological conditions, the long-term average annual production volume of PVO-Vesivoima Oy is approximately 1.7 TWh.

In accordance with PVO's systematic hydropower plant refurbishment programme, the renovation of automation systems of the Raasakka hydropower plant on the Iijoki river was completed during 2018. The investment aims to further enhance the efficiency and reliability of the power plant.

The following table sets forth PVO's hydropower plants as of 31 December 2018:

<b>Plant and location</b>	<b>Energy source</b>	<b>Year of completion</b>	<b>Electricity Output (MW)</b>	<b>PVO Group's share<sup>(1)</sup> (MW)</b>	<b>Dam category</b>	<b>Production company</b>
Isohaara, Kemijoki.....	Water	1949, 1993	113	113	1	PVO-Vesivoima Oy
Jumisko, Kemijoki.....	Water	1954	26	26	2	PVO-Vesivoima Oy
Raasakka, Iijoki.....	Water	1971, 1997	64	64	1	PVO-Vesivoima Oy
Maalismaa, Iijoki.....	Water	1967	39	39	2	PVO-Vesivoima Oy
Kierikki, Iijoki.....	Water	1965	38	38	2	PVO-Vesivoima Oy
Pahkakoski, Iijoki.....	Water	1961	42	42	1	PVO-Vesivoima Oy
Haapakoski, Iijoki.....	Water	1963	33	33	2	PVO-Vesivoima Oy
Melo, Kokemäenjoki.....	Water	1971	68	68	2	PVO-Vesivoima Oy
Harjavalta, Kokemäenjoki.....	Water	1939, 2016	105	21	2	Länsi-Suomen Voima Oy
Kaaranneskoski, Tengeliönjoki.....	Water	1954	3	2	2	Tornionlaakson Voima Oy
Jolmankoski, Tengeliönjoki.....	Water	1955	0.5	0	2	Tornionlaakson Voima Oy
Portimokoski, Tengeliönjoki.....	Water	1987	<u>11</u>	<u>5</u>	2	Tornionlaakson Voima Oy
<b>Total</b> .....			<b><u>541</u></b>	<b><u>449</u></b>		

(1) Includes the PVO Group companies and the PVO Group's share of associated companies' and joint ventures' total hydropower capacity.

## Thermal Power

### Combined heat and power

The CHP plants produce process steam and district heat for local industry and communities, and also electricity. As of 31 December 2018, the PVO Group had a total of 620 MW of CHP electricity production capacity at its disposal. The combined total process steam and district heat production capacity of the power plants was 1,472 MW.

In 2018, the process steam and district heat deliveries of the PVO Group amounted to 4.4 TWh (4.5 TWh and 5.5 TWh in 2017 and 2016 respectively). The PVO Group's electricity supplies from CHP plants amounted to 2.1 TWh in 2018 (1.9 TWh in 2017).

The PVO Group's CHP plants consists of nine wholly- or partially-owned CHP plants. The CHP plants are located at industrial sites and integrated into industrial processes. Eight of these are bioenergy power plants, fuelled mainly by wood, peat and SRF. Vaskiluoto 2 power plant is coal-fired with a biomass gasification plant to replace up to 40 percent of the use of coal with biomass. On 4 April 2019, the Issuer agreed on the arrangement with EPV Energy Ltd to transfer all assets and business operations of Vaskiluodon Voima Oy. See "*Information about PVO—Recent Events*" for more information. In 2018, PVO completed investments in number of CHP plants to improve energy efficiency and adjustability of the plants as well as to reduce and better manage emissions from the production.

The following table sets forth PVO's combined heat and power plants as of 31 December 2018:

Plant and location	Fuel	Completion year	Total electricity output (MW)	PVO Group's share <sup>(1)</sup> (MW)	Total heat output (MW)	PVO Group's share <sup>(1)</sup> (MW)	Production company
Vaskiluoto 2, Vaasa <sup>(2)</sup> .....	Coal	1981	230	115	175	88	Vaskiluodon Voima Oy
Alholmens Kraft 1, Pietarsaari .....	Wood	1991	25	12	85	42	Oy Alholmens Kraft Ab
Alholmens Kraft 2, Pietarsaari .....	Peat, wood, coal, SRF	2001	240	120	160	80	Oy Alholmens Kraft Ab
Kymin Voima, Kouvola.....	Wood, peat	2002	76	76	180	180	Kymin Voima Oy
Laanilan Voima, Oulu.....	Wood, peat	1982	30	30	145	145	Laanilan Voima Oy
Porin Prosessivoima, Pori .....	Wood, peat	1987	65	65	212	212	Porin Prosessivoima Oy
Rauman Biovoima, Rauma.....	coal, REF, oil	2008					
	Wood, peat, SRF, coal	2006	65	65	190	190	Rauman Biovoima Oy
Kaukaan Voima, Lappeenranta .....	Wood, peat	2009	125	125	262	262	Kaukaan Voima Oy
Hämeenkyrön Voima, Hämeenkyrö.....	Wood, peat, SRF	2012	12	12	63	63	Hämeenkyrön Voima Oy
<b>Total.....</b>			<b>868</b>	<b>620</b>	<b>1,472</b>	<b>1,262</b>	

(1) Includes the PVO Group companies and the PVO Group's share of associated companies' and joint ventures' total CHP electricity and heat capacity.

(2) On 4 April 2019, PVO agreed on the arrangement with EPV Energy Ltd to transfer all assets and business operations of Vaskiluodon Voima Oy to EPV Energy Ltd. The ownership of the assets will transfer on 1 January 2023.

### Condensing power

As of 31 December 2018, the condensing power production, or stand-alone electricity production, capacity of PVO Group was 623 MW and consisted of the Issuer's share, through its 56.8 percent ownership in TVO's C-series shares, of the Meri-Pori coal-fired power plant (see "*Information about TVO—TVO's Operations—Coal Power*") and electricity production capacity of PVO-Lämpövoima Oy's condensing power plants (477 MW).

In June 2018, the Issuer entered into agreement to sell all its shares in the C-series of TVO entitling to Meri-Pori's production capacity 146 MW as of the beginning of 2019. Also, the production operations of the coal-fired condensing power plants owned by PVO-Lämpövoima Oy, a wholly-owned subsidiary of the Issuer, in Kristiinankaupunki (Kristiina 2) and Pori (Tahkoluoto), and the power reserve plant in Kristiinankaupunki (Kristiina 1) were ceased already in 2015. Since then, the business of PVO-Lämpövoima Oy has been reported as discontinued operation in the consolidated financial statements of the Issuer. In February 2018, PVO-Lämpövoima Oy decided to demolish both power plants. The demolition work is expected to start during the first half of 2019.

In 2018, PVO Group produced 0.4 TWh of condensing power.

The following table sets forth PVO's condensing power plants as of 31 December 2018:

<u>Plant and location</u>	<u>Fuel</u>	<u>Year of completion</u>	<u>Electricity output (MW)</u>	<u>The PVO Group's share<sup>(1)</sup> (MW)</u>	<u>Production company</u>
Kristiina 2, Kristiinankaupunki .....	Coal	1983	242	242	PVO-Lämpövoima Oy
Tahkoluoto, Pori .....	Coal	1976	235	235	PVO-Lämpövoima Oy
Meri-Pori, Pori <sup>(2)</sup> .....	Coal	1994	565	146	Fortum Power and Heat Oy
<b>Total</b> .....			<b>1,042</b>	<b>623</b>	

(1) Includes the PVO Group companies and the PVO Group's share of associated companies' and joint ventures' total condensing power production capacity.

(2) On 31 December 2018, PVO sold all C-shares of TVO entitling to the power production of the Meri-Pori coal-fired power plant as of 1 January 2019.

## Nuclear Power

The Issuer procures nuclear power from its 57.1 percent-owned joint venture TVO. The Issuer is the largest shareholder of TVO owning 56.8 percent of A-series and 60.2 percent of B-series of TVO shares. For more information on TVO, see "Information about TVO".

## Long-term Production Costs

On long-term basis, PVO aims to provide stable and cost efficient energy to its shareholders. During the last three years, the average production cost for electricity generated by PVO-Vesivoima Oy has been approximately EUR 12/MWh. The production costs for individual CHP plants vary depending on plant specific factors. During the last three years, the total production cost for heat, process steam and electricity generated by PVO Group's CHP plants has been approximately EUR 32/MWh on average.

According to information made public by TVO, TVO's long-term production cost target for OL1, OL2 and OL3 EPR is expected to be below EUR 30/MWh. Estimate is based on TVO's production targets and the current operating and capital cost expectations.

## Environment

The PVO Group's work to mitigate any environmental impacts is guided by the PVO Group's environmental and energy efficiency policy. The PVO Group's environmental and energy efficiency policy dictates the identification and investigation of the environmental impact and risks as well as the natural values related to the PVO Group's operations, and the opportunities for improving the efficiency of the production and utilisation of energy. When preparing impact assessments, the entire life cycle of the power plant, from project planning to decommissioning, is taken into account by the Issuer. The Issuer's associated companies and joint ventures are governed by their own respective environmental and energy efficiency policies.

The Issuer is targeting to reach 95 percent carbon-neutral electricity procurement by 2020. The share of carbon-neutral energy sources in the Issuer's electricity procurement amounted to 87 percent in 2018 (2017: 92 percent). Electricity procurement forms in the Issuer's portfolio that are considered to be carbon-neutral are the emission-free hydropower and nuclear power and the electricity generated with wood-based fuels in thermal power plants. In recent years, the proportion of carbon-neutral energy sources has reached a new higher level due to the decreased use of coal in electricity production, and the good production levels of hydropower.

Environmental management systems certified in accordance with ISO 14001 are in use in the majority of the Issuer's subsidiaries. Five of the PVO Group's power plants certified their environmental systems in accordance with the new ISO 14001:2015 standard in 2016. Most of the Issuer's portfolio companies are committed to the energy efficiency systems ETJ+ or ISO 50001.

## Hydropower

Hydropower production has regional and local impacts on waterways and fish stocks. Environmental management systems certified in accordance with ISO 14001 are in use in hydropower production, and an energy efficiency system was adopted in 2015 as a result of the Energy Efficiency Act (1429/2014, as amended; *Fi: energiatehokkuuslaki*) that entered into force at the beginning of 2015. In order to fulfil its obligation to sustain the fish stocks of the Kemijoki and Iijoki waterways and the sea area, PVO-Vesivoima Oy stocked in total approximately 2.5 million fry in 2018.

In March 2018, the Centre for Economic Development, Transport and the Environment of Lapland submitted an application to the Regional State Administrative Agency for Northern Finland concerning fish stocking and fish stock management obligations with regard to the Kemijoki river. In October 2017, similar application was submitted concerning the Iijoki river. In addition to new requirements, such as, for example, the requirement to extend the existing fish stocking obligations and to construct new fishways, these applications include additions to the current obligations. The Regional State

Administrative Agency did not announce applications during 2017. If imposed on PVO-Vesivoima Oy, a subsidiary of the Issuer, among others, such changes could require significant investments on the part of the PVO Group. The hydropower producers operating in the Iijoki and Kemijoki rivers, PVO-Vesivoima Oy and Kemijoki Oy, consider the proposed changes unfounded. The application process is pending as of the date of this Listing Prospectus.

In 2018, inspections in compliance with the Dam Safety Act (494/2009, as amended; *Fi: patoturvallisuuslaki*), to be held every five years, took place at the dams of Haapakoski and Pahkakoski power plants and at the Maunujärvi dam. In addition to the obligatory aquatic environment management work, the PVO Group engages in voluntary environmental management within cooperation projects and participate in monitoring and research of the aquatic environment. PVO-Vesivoima Oy participates in Finland's largest migratory fish project that was started in 2017. The three-year project includes building a fishway at the Raasakka power plant, downward migration solutions for young salmon and trout, fish planting programme, fish transfers and old riverbed constructions of Raasakka and Maalismaa power plants.

A leak detected in the retaining earth dam of the Melo power plant in 2016 was repaired by grouting throughout the year. The repair work continues as of the date of this Listing Prospectus and is expected to be finalised during 2019. Repair and monitoring of the earth dam has been carried out in cooperation with fire safety authorities and dam specialists. The dam repairs have not affected the environment or the power generation operations at the power plant.

### ***Thermal power***

The PVO Group's thermal power plants use wood fuel, peat, coal and SRF fuels as primary fuels and natural gas and oil as auxiliary fuels. The most significant environmental impact of thermal power production concerns the atmosphere. The power plants' emissions into the air vary according to the fuel and the production volumes of electricity and thermal power.

All the thermal power plants operated by the PVO Group fall within the application of the Emissions Trading Act (311/2011, as amended; *Fi: päästökauppalaki*).

All thermal power plants submitted applications for the review of their environmental permits in 2014, because the new Environmental Protection Act (527/2014, as amended; *Fi: ympäristönsuojelulaki*) required such submission from large combustion plants. All of the PVO Group's thermal power plants received new environmental permits in 2015.

The new limits for emissions into the air, set out in the IE Directive, entered into force in Finland at the beginning of 2016. For thermal power operations, the most difficult issue is the reduction of nitrogen oxide (NOx) emissions, and studies are being conducted on the available technical solutions (see "*Ongoing and Future Investments—Thermal power*" below). Some facilities of the PVO Group are included in the national IE Directive transition plan approved by the European Commission on 10 March 2014. The transition plan provides some flexibility for the adoption of the new emission limits. The transition period is from 1 January 2016 to 30 June 2020. During this period, the total sulphur dioxide, nitrogen oxide and particle emissions in tonnes as well as percentages will be monitored.

## **Ongoing and Future Investments**

### ***Hydropower***

A leak detected in the retaining earth dam of the Melo power plant in 2016 was repaired by grouting throughout the year. The repair work continues as of the date of this Listing Prospectus and is expected to be finalised during 2019. Repair and monitoring of the earth dam has been carried out in cooperation with fire safety authorities and dam specialists. The dam repairs have not affected the environment or the power generation operations at the power plant.

PVO-Vesivoima Oy has a systematic basic refurbishment program where each hydropower plant will be refurbished approximately every 20 years.

### ***Thermal power***

The IE Directive, which entered into force in January 2011, establishes requirements on power plants' emissions into the air. These requirements have been applied to existing power plants since the beginning of 2016. Some of the thermal power plants of the PVO Group are included in the national IE Directive transition plan approved by the European Commission in spring 2014. The transition plan allows the committed power plants some flexibility in the adoption of the new emission limits, with the transition period ending in June 2020.

The EU published the updated LCP-BREF in August 2017. The document applies to thermal power plants of PVO. The IE Directive establishes that BAT conclusions made on the basis of the BAT reference documents are binding, and as a result, the emission limits are expected to become more stringent. Plant operations must comply with the related requirements within four years from the establishment of the BAT conclusions. However, for majority of PVO's CHP plants, whose main activity is the delivery of process steam for industrial operations, the transition period is expected to be longer depending on when the BAT conclusions of the relevant industry sector will be published.



The Issuer continues the assessment of investment needs in relevant thermal power plants and prepares for the necessary licensing processes.

### ***Nuclear Operations***

The Issuer has committed to an investment into the nuclear power plant OL3 EPR under construction by TVO. The current total commitment of EUR 991 million consists of a EUR 432 million investment in equity and shareholder loans of a maximum of EUR 559 million. The investment is based on the financial plan of OL3 EPR, according to which capital is raised in accordance with the progress of the project.

As of 31 December 2018, the Issuer had fulfilled EUR 841 million of the current total commitment, consisting of EUR 432 million in equity and EUR 409 million in shareholder loans. The remaining shareholder loan commitment of EUR 150 million will be paid in accordance with the progress of the project, if needed. In March 2018, the Issuer received a total of EUR 90 million in shareholder loan commitments from its B2 share series shareholders. The shareholder loan commitments are available to the Issuer to fund the necessary investments to finalize the OL3 EPR project, if needed.

### **Financing Agreements and Liquidity Position**

Financing and liquidity management within the PVO Group is managed centrally by the PVO Group Treasury. All excess cash positions are centralised to the Issuer either through internal cash-pools or by internal deposits. The Issuer raises external debt financing it needs in its own name and each subsidiary's long-term debt financing needs are mainly obtained in the name of each subsidiary. According to its financial policy, the PVO Group seeks to have a balanced interest-bearing debt portfolio both in terms of funding sources and maturities. According to the PVO Group's financial policy, the Issuer may also lend to subsidiaries. The Issuer also maintains liquidity lines available for its subsidiaries. According to the PVO Group's financial policy, all subsidiaries should maintain equity to assets ratio above 27 percent.

As of 31 December 2018, the PVO Group's cash and cash equivalents amounted to EUR 60 million (2017: EUR 44 million). In addition, the Issuer had an undrawn EUR 300 million committed revolving credit facility available for liquidity purposes. The facility will be reduced to EUR 279 million as of June 2021 and it expires in June 2022. As of the date of this Listing Prospectus, revolving credit facility remains undrawn. Additionally, the Issuer has EUR 90 million of undrawn shareholder loan commitments. Shareholder loan commitments were signed in March 2018 and they are available to the Issuer to fund investments necessary to finalise the OL3 EPR project, if needed. The financing arrangements of the PVO Group do not include any financial covenants.

For short-term funding, the Issuer has a domestic commercial paper program of EUR 300 million, of which EUR 85 million was used as of 31 December 2018.

As of 31 December 2018, the consolidated equity ratio of the PVO Group was 39 percent. The following table sets forth the consolidated equity ratio of the PVO Group as of the dates indicated:

	<b>As of 31 December</b>	
	<b>2018</b>	<b>2017</b>
	<b>(unaudited)</b>	
	<b>(percent)</b>	
Equity to assets ratio (IFRS, Group) <sup>(1)</sup> .....	39	40

(1)  $\text{Equity to assets ratio (percent)} = 100 \times \text{Shareholders' equity} / \text{Balance sheet total}$ .

As of 31 December 2018, the PVO Group's interest-bearing liabilities amounted to EUR 1,222 million (2017: EUR 1,181 million), of which EUR 196 million loan from the Nuclear Waste Management Fund, EUR 410 million of loans from financial institutions, EUR 125 million of senior fixed rate notes and EUR 85 million of commercial papers were at the Issuer level. A total of EUR 406 million of interest-bearing liabilities were at subsidiary level including EUR 202 million of finance lease contracts relating to power plant equipment and EUR 204 million of loans from financial institutions.

The following table sets forth the PVO Group’s maturity profile as of 31 December 2018:

	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023-</u>	<u>Total</u>
	(audited)					
	(EUR million)					
Loans from financial institutions <sup>(1)</sup> .....	6	212	283	108	5	<b>614</b>
Bond .....	—	—	—	—	125	<b>125</b>
Loan from the Nuclear Waste Management Fund (TVO) <sup>(2)</sup> .....	—	—	—	—	196	<b>196</b>
Finance lease liabilities .....	24	90	7	35	46	<b>202</b>
Commercial papers .....	<u>85</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<b>85</b>
<b>Total</b> .....	<b><u>128</u></b>	<b><u>315</u></b>	<b><u>302</u></b>	<b><u>151</u></b>	<b><u>382</u></b>	<b><u>1,222</u></b>

(1) EUR 283 million maturing in 2021 include extension options of 62.5 million.

(2) The loan from the Nuclear Waste Management Fund is presented as a loan with a loan term of over five years although its size and price are set annually. TVO has borrowed the amount from the Nuclear Waste Management Fund and has granted a loan with the corresponding amount to the Issuer. As a security for the loan, the Issuer has given bank guarantees for the benefit of the Nuclear Waste Management Fund. The bank guarantees expire on 30 April 2019.

Under the Finnish Nuclear Energy Act, the licensee under a nuclear waste management obligation is entitled to receive a loan against full securities for a fixed period from the Nuclear Waste Management Fund. The amount borrowed from the Nuclear Waste Management Fund may not exceed 75 percent of the Nuclear Waste Management Fund holding last confirmed for the said licensee under a nuclear waste management obligation. The shareholders of the licensee have the right to use the right of the licensee to the extent not used by the licensee itself. The amount to be lent from the Nuclear Waste Management Fund to the shareholders at any given time shall be lent to the shareholders requesting it in proportion to their shareholding, as specified by the Nuclear Waste Management Fund in greater detail, if necessary.

#### Personnel

As of 31 December 2018, the number of employees working for the PVO Group was 105 (2017: 106).

#### Material Contracts

Except as discussed in “—Ongoing and Future Investments—Nuclear Operations” and “—Financing Agreements and Liquidity Position” above, there are no material contracts that have not been entered into in the ordinary course of the Issuer’s business, which could result in any member of the PVO Group being under an obligation or entitlement that is material to the Issuer’s ability to meet its obligations to Noteholders in respect of the Notes.

## INFORMATION ABOUT TVO

*The information below has been derived from information made public by TVO, including TVO's annual report for the year ended 31 December 2018, interim report for the three months ended 31 March 2019 and the Base Prospectus relating to TVO's Euro Medium Term Note programme, dated 29 June 2018 (as supplemented on 6 November 2018). See "General Information—Other Information Derived from Third Party Sources".*

### **TVO Group**

TVO is the ultimate parent company of the TVO group (the "**TVO Group**"). Its largest shareholder is the Issuer, with a total shareholding of 57.1 percent. Subsidiaries in the TVO Group are TVO Nuclear Services Oy ("**TVONS**") and the joint venture Posiva Oy.

TVO's legal and commercial name is Teollisuuden Voima Oyj. TVO was incorporated as a limited liability company under the laws of the Republic of Finland and was registered with the Finnish Trade Register on 25 April 1969 (Trade Register number 196.448 and Business Identity Code 0196656-0). In 2007, TVO was registered as a public limited liability company, with no shares listed on a stock exchange. TVO's principal place of business is at Olkiluoto, FI 27160 Eurajoki, Finland, and the telephone number of its registered office is +358 2 8381 1.

TVO's principal object, as set out in its Articles of Association, is the construction and procurement of power plants and power transmission equipment, generation and supply of electricity at cost price to its shareholders who consist mainly of electric utilities or their subsidiaries. TVO's objective is to produce electricity for the shareholders safely, economically and in an environmentally friendly manner.

### **Operating Model of TVO**

TVO operates on a Mankala Principle which is widely applied in the Finnish energy industry. The Mankala Principle is not defined in Finnish legislation or other regulation but is based on the Articles of Association of each company applying the Mankala Principle and, therefore, the detailed operating model, including the provision for coverage of costs by the shareholders, may differ between companies applying the Mankala Principle. The Mankala Principle applicable to TVO is described in Article 4 of the Articles of Association of TVO. Pursuant to the Articles of Association, amending Article 4 of the Articles of Association would require unanimous shareholder approval.

Under its Articles of Association, TVO supplies electricity to its shareholders at cost, which means that it delivers the electricity it has produced to its shareholders in proportion to their shareholdings in each series of TVO shares. Each of the shareholders of each series of TVO shares is liable for its proportionate share of the variable and fixed annual costs related to the nuclear power plant unit or other units of TVO represented by such series of shares, as specified in Article 4 of the Articles of Association of TVO, and other than in exceptional circumstances such as those described under "*Risk Factors—Risks related to Nuclear Operations of TVO*" and "*Risk Factors—Risks related to PVO's Financing*". In practice, TVO currently prepares an annual balance sheet divided into series of its shares. The balance sheet, which is presented each year to a meeting of TVO's shareholders, is prepared solely for management accounting purposes in order to allocate annual costs, incurred by TVO, to the different series of shares. As to day-to-day operations, TVO prepares, for each calendar year, a related cost budget, which consists of normal operating costs (variable and fixed), interest on TVO's entire loan portfolio (including hedging) and depreciation (based on TVO's total assets and expected lifetime of the assets) and is used as the basis for setting the amount of each shareholder's payment for electricity. Of such payments, the amount corresponding to the depreciation of assets (net of capital expenditures), which is a non-cash item, is used to amortise TVO's entire loan portfolio.

In addition to invoicing its shareholders on a monthly basis for fixed and variable costs in accordance with its Articles of Association, TVO finances its operations, including investments, through various types of financing from third parties, including loans under the Euro Medium Term Note programme, and has also received a number of equity capital injections and/or subordinated loans from its shareholders in the past. In accordance with shareholder loan commitments signed by the B-Series shareholders in June 2013 and in December 2017, in order for TVO to maintain a sufficient equity ratio in relation to OL3 EPR and to manage potential additional delays and costs in connection with the finalisation of the project (as anticipated at those times), as of the date of this Listing Prospectus, EUR 250 million of these commitments are still undrawn by TVO. In addition, pursuant to a Facilities Agreement executed on 2 February 2016, TVO also currently maintains a revolving credit facility of EUR 1,300 million consisting of two tranches: a EUR 1,000 million five-year tranche and a EUR 300 million three-year tranche. At the date of execution of the revolving credit facility, both tranches included two one-year extension options which have since been exercised, following that the tranches will mature 2023 and 2021, respectively. In addition, in February 2019, the maturity of the EUR 300 million three-year tranche was further extended to 2022. At this time, the entire revolving credit facility remains undrawn according to public statements by TVO.

TVO is a limited liability company and its shareholders have no personal liability for the indebtedness or other obligations of TVO. Pursuant to its Articles of Association, TVO has the sole right to call upon the responsibilities of the shareholders in accordance with Article 4 of the Articles of Association.

In accordance with the Articles of Association of TVO, each shareholder's share of the liability for TVO's annual costs is always limited to the amount corresponding to the proportion of its shareholding in relation to all shares belonging in the same series, and another shareholder's failure will not increase the shareholder's liability based on its shareholding. The shareholders shall not be liable for costs other than costs of TVO specified in the Articles of Association, unless otherwise agreed in writing.

A prerequisite to the shareholder's right to receive electricity is, according to the Articles of Association of TVO, that it has paid its share of costs on time. If a shareholder neglects to observe its payment obligation, TVO will have the right to immediately cut off the distribution of electricity to the shareholder and to sell the shareholder's portion of electricity to a party submitting the best offer, primarily to another shareholder of TVO. To date, TVO has never experienced payment delays by its shareholders. By applying the Mankala Principle, TVO supplies electricity only to its shareholders and at cost price. Consequently, in principle the profit/loss for the financial year is usually zero or close to zero. As a result, TVO is not exposed to fluctuations in the market price for electricity. Furthermore, TVO is not subject to price regulation.

The costs of production, *i.e.*, the price of the electricity, is charged in two or three stages: fixed costs are collected monthly in advance and variable costs are charged monthly in arrear and are determined according to the amount of electricity actually supplied. Any further operating costs incurred, if any, are funded on an annual basis. Currently, approximately 25 percent of any new large investments, such as the OL3 EPR construction project, come from equity capital injections or subordinated shareholder loans (hybrid equity under IFRS). A shareholder could buy less electricity than it is entitled to, however, such a shareholder would still be required to pay the fixed costs, although, the variable costs related to that electricity produced, would be reduced.

## TVO's Shareholders

TVO has six shareholders, and its share capital is divided into three share series, A, B and C. The A-series entitles shareholders to electricity generated by OL1 and OL2 and the gas-fired plants at Olkiluoto. The B-series entitles shareholders to the electricity that will be generated by OL3 EPR. The C-series entitles shareholders to the electricity generated by TVO's share in the Meri-Pori coal-fired power plant. Existing shareholders have a pre-emptive right to any shares to be issued in proportion to their current shareholdings in TVO. None of the shareholders have majority rights and important decisions such as investment plans and cost budgets require a three-quarters' majority vote of the Board of Directors of TVO. However, a change in the Mankala business model of TVO would require unanimous shareholder approval. The shareholder structure has been stable since TVO's inception, with no significant shareholder changes over the last 20 years.

As of 1 January 2019, the share series were held as follows:

	<u>A-series</u>	<u>B-series</u>	<u>C-series</u>	<u>Total</u>
	(percent)			
<b>TVO's shareholders</b>				
EPV Energy Ltd.....	6.6	6.6	–	6.4
Fortum Power and Heat Oy <sup>(1)</sup> .....	26.6	25.0	100.0	27.6
Loiste Holding Oy .....	0.1	0.1	–	0.1
Kemira Oyj .....	1.9	–	–	0.9
Oy Mankala Ab <sup>(2)</sup> .....	8.1	8.1	–	7.9
Pohjolan Voima Oyj .....	<u>56.8</u>	<u>60.2</u>	<u>–</u>	<u>57.1</u>
<b>Total</b> .....	<b><u>100.0</u></b>	<b><u>100.0</u></b>	<b><u>100.0</u></b>	<b><u>100.0</u></b>

(1) Fortum Power and Heat Oy is a subsidiary of Fortum Oyj.

(2) Oy Mankala Ab is wholly-owned by Helen Oy, the parent company of the municipal energy group of the City of Helsinki.

## TVO's Operations

### Nuclear Operations

#### *Olkiluoto 1 and Olkiluoto 2*

TVO currently operates two nuclear power plant units, OL1 and OL2. The rated net output of the nuclear power plant units are 890 MW for OL1 and 890 MW for OL2. In 2018, the annual output of the OL1 and OL2 nuclear power plant units

combined was 14,089 GWh (13,414 GWh in 2017). The OL1 and OL2 nuclear power plant units combined produced 17 percent of the aggregate amount of electricity used in Finland during 2018 (16 percent in 2017).

	2018		2017	
	Net production (GWh)	Capacity (percent)	Net production (GWh)	Capacity (percent)
Olkiluoto 1 .....	6,755	87.8	7,158	93.1
Olkiluoto 2 .....	7,334	94.3	6,256	81.3
<b>Total</b> .....	<b>14,089</b>		<b>13,414</b>	

OL1 and OL2 are in constant operation, aside from planned maintenance outages, for the supply of base-load electricity. In addition to regular annual outages, TVO also carries out extensive service outages approximately once every 10 years in order to implement major modifications. TVO maintains OL1 and OL2 according to best practices to ensure highest safety standards and efficient power generation until the end of the economic lifetimes of the units, which is estimated to be approximately 60 years.

The annual outages of 2018 started on 22 April 2018. OL2 was disconnected from the national grid for a refuelling outage. In addition to refuelling, various maintenance activities, repairs and tests scheduled for execution once a year were carried out. The plant unit was reconnected to electricity production on 6 May 2018.

The maintenance outage for OL1 started on 13 May 2018. Major works during the outage included replacement of the condenser and the ejectors, the forward pumping of bleed, and replacement of recirculation pumps. The duration of the outage was approximately five weeks and the plant unit was reconnected to electricity production on 23 June 2018.

#### *Olkiluoto 3 EPR*

In 2005, the Finnish Government granted a construction licence for OL3 EPR to be constructed at the Olkiluoto plant. OL3 EPR is currently under construction by the Supplier. The companies constituting the Supplier are jointly and severally liable for the turnkey delivery of OL3 EPR, and Areva SA provided a parent company guarantee in respect of the contractual obligations of Areva NP and Areva GmbH until the end of 2012.

According to the Plant Contract, the Supplier is responsible for the design, engineering, equipment procurement, equipment manufacture, construction, erection, testing, commissioning, licensing, fuel supply and remedying of defects, as well as project management and schedule of OL3 EPR on a turnkey basis. Due to the Supplier’s turnkey responsibility, TVO is only responsible for a limited scope of work under the Plant Contract. The Plant Contract includes contractual protection for TVO, including a contract performance bond, a guarantee period bond and liquidated damages for delays, plant performance and plant availability. Pursuant to the terms of the GSA, in the event that the Supplier fails to complete the OL3 EPR project by 30 June 2021, TVO has a right to terminate the Plant Contract upon notice.

Areva NP, Areva GmbH, Areva group parent company Areva SA, Siemens AG and TVO signed the GSA in March 2018 concerning the completion of the OL3 EPR project and the settlement of disputes relating the project. In addition to settling all on-going legal actions related to the OL3 EPR project (see “*Risk Factors—Risks related to Nuclear Operations of TVO—There are several risks related to the Olkiluoto 3 EPR Project*” and “*Additional Information—Governmental, Legal and Arbitration Proceedings—Joint Ventures*”), the GSA stipulates as follows according to public statements by TVO:

- The turnkey principle of the Plant Contract and the joint and several liability of the Supplier consortium companies remain in full force.
- In order to provide and maintain adequate and competent technical and human resources for the OL3 EPR project completion, Areva will source needed additional resources from Framatome, whose majority owner is EDF.
- The GSA sets up several funding mechanisms to secure the completion of the OL3 EPR covering all guarantee periods, including a trust funded by Areva NP, Areva GmbH and Areva SA to secure the financing of the costs of completion and start-up of the OL3 EPR.
- The ICC arbitration concerning the costs and losses caused by the delay of the OL3 EPR project is settled by a total financial compensation of EUR 450 million to be paid to TVO in two instalments by the Supplier consortium companies.
- The parties withdraw all on-going legal actions related to OL3 EPR, including the ICC arbitration.
- The Supplier was entitled to receive an incentive payment upon timely completion of the OL3 EPR project (the amount depending on the actual completion date of the project and, in any case, limited to a maximum of

EUR 150 million). Should the completion be delayed further beyond 2019, the Supplier shall pay penalties to TVO (the amount depends on the actual completion date of the project and, in any case, is limited to a maximum of EUR 400 million).

Based on the current OL3 EPR project schedule provided by the Supplier, certain capital expenditure assumptions made by TVO and the effect of the GSA, the total investment in the OL3 EPR is estimated by TVO to be approximately EUR 5.5 billion.

In its interim financial statements for the three months ending 31 March 2018, TVO recorded the first payment of EUR 328 million of the settlement amount in cash and cash equivalents and it reduced the initial OL3 EPR project costs incurred by TVO. The second payment of EUR 122 million payable at the completion date or, in any event, at the latest on 31 December 2019, has been recorded in receivables and it also reduces the total project cost.

According to a stock exchange release published by TVO on 10 April 2019, the Supplier is expected to update the schedule for OL3 EPR project and deliver a new schedule to TVO by the end of June 2019. Based on the information provided by the Supplier, nuclear fuel will not be loaded to the reactor at least before the end of August 2019.

After receiving the updated project schedule from the Supplier in April 2019, TVO issued a market message required by law to the Nord Pool electricity market informing the market about the scheduled regular electricity production start date in September 2019. Based on the incentive and penalty mechanism agreed in the GSA, TVO's total investment cost for the OL3 EPR unit is not expected to change due to the revised schedule.

The OL3 EPR nuclear power plant unit will comprise a European Pressurised Water Reactor which, when operational, will have an installed capacity of approximately 1,600 MW and will be more efficient than the existing nuclear power plant units at Olkiluoto as it will produce less radioactive waste per MWh of electricity produced, with the planned operating life being at least 60 years. However, no assurance can be given about the actual operating life of a nuclear power plant.

However, as the OL3 EPR project is still on-going, no assurance can be given that further delays, which could have a material adverse effect on TVO's business and financial position, will not occur prior to completion of the OL3 EPR project. See "*Risk Factors—Risks related to Nuclear Operations of TVO—There are several risks related to the Olkiluoto 3 EPR Project*" and "*Additional Information—Governmental, Legal and Arbitration Proceedings—Joint Ventures*" for further information.

According to public statements by TVO, most of the construction works for the plant unit have been completed. The installation of the electrical systems, the instrumentation and control system and mechanical systems is still in progress. Simulator training for the operating personnel commenced in February 2017. Hot functional tests were completed in May 2018. During the hot functional tests, it was noticed that the pressurizer surge line vibrates. Vibration will be eliminated by modifying surge line's supporting structures. Training of the workforce at the site at 31 May 2018 was about 2,000 persons. Occupational safety at the site remained at a good level.

In addition to the normal monitoring of deliveries and manufacture, several quality audits have been conducted (including by TVO and STUK) in order to inspect the activities of the Supplier and the Supplier's subcontractors. TVO continues to provide support for the Supplier to ensure the completion of the project as soon as possible, without compromising safety and quality requirements at the site.

TVO submitted its application for the operating licence for the OL3 EPR nuclear power plant unit to the MEE on 14 April 2016. On 25 February 2019, STUK gave its statement on the operating licence application of OL3 EPR plant unit. In its statement, STUK did not see any obstacles to grant the licence as applied until the end of 2038. Following STUK's statement, the Finnish Government granted the operating licence for OL3 EPR nuclear power plant unit on 7 March 2019. TVO will still need a separate permission from STUK for the loading of the nuclear fuel.

In August 2017, TVO drew a EUR 100 million shareholder loan from the existing shareholder loan commitments for the OL3 EPR project. As at 31 March 2019, the total amount of shareholder loans outstanding was EUR 679 million. In December 2017, the shareholder loan commitments were increased with an additional commitment of EUR 150 million and, following a drawdown of EUR 100 million in September 2018, the total undrawn shareholder loan commitment was EUR 250 million as at 31 March 2019.

### *Operating Licences*

An operating licence for a nuclear power plant is granted for a fixed period in accordance with the Finnish Nuclear Energy Act (*Ydinenergiälaki*, 11.12.1987/990). Currently, the OL1 and OL2 nuclear power plant units have been granted operating licences for a 20-year period expiring in 2038. On 26 January 2017, TVO filed with the MEE an application for the renewal of the operating licence of OL1 and OL2. The Government granted the licence for the next 20 years on 20 September 2018. The operating licence application for OL3 EPR was filed with the MEE on 14 April 2016. On 25 February 2019, STUK

gave its statement on the operating licence application of OL3 EPR nuclear plant unit. In its statement, STUK did not see any obstacles to grant the licence as applied until the end of 2038. Following STUK's statement, the Finnish Government granted the operating licence for OL3 EPR nuclear plant unit on 7 March 2019.

STUK's safety assessment on extending the licence of the operating units of Olkiluoto was based on an examination of the documents provided by the power company and the results of continuous supervision by STUK. In its safety assessment, STUK concluded that the operation of these power plant units is safe and meets the legislative requirements. Furthermore, according to STUK's assessment the nuclear waste management procedures used by TVO are sufficient and appropriate.

#### *Fuel Procurement*

Procurement of nuclear fuel involves the following three main elements: the purchase of raw uranium, uranium enrichment services, and nuclear fuel manufacture. TVO itself is not involved in the uranium acquisition, enrichment or manufacture processes and only receives the final product which has been sufficiently enriched to be used as a fuel, but has not been enriched further. TVO maintains relationships with a number of suppliers in each field which results in reliable and cost efficient fuel sourcing, diversified supply sources and competitive pricing. Most of the above services are being procured under long-term contracts.

#### *Nuclear Waste Management - Disposal*

According to the Finnish Nuclear Energy Act, each nuclear operator is fully responsible for the costs of waste management and the final cost of decommissioning. Estimates of these future costs are assessed annually and reviewed by the MEE. TVO bears full legal and financial responsibility for the management and disposal of nuclear waste produced by the Olkiluoto nuclear power plant units.

After removal from the reactor, spent nuclear fuel is placed in pools within the reactor halls to cool for a few years. Thereafter the spent fuel is packed in a strong transfer container filled with water. This container is transported on a purpose-built vehicle to the on-site interim storage facility where the spent fuel will stay 40 years in storage pools before being transferred to the final repository. The expansion construction work of the interim storage facility to double the storage capacity which began in the summer of 2010 has now been completed.

TVO currently operates permanent final repositories for low-level and intermediate-level radioactive waste at the Olkiluoto site. Low-level waste is miscellaneous waste contaminated with radioactive material (including flame-retardant fabrics, plastics, protective clothing, tools and machine parts and pipes removed from the power plant). Intermediate-level waste consists of the ion-exchange resins used to purify the water used in the nuclear power production processes.

In order to reduce the risk of nuclear irradiation, multi-layered containment systems and sophisticated safety protocols are used to isolate radioactive materials from the surrounding environment during the process of interim storage, packaging, transport, relocation and encasement of nuclear waste in the final disposal repositories. The operating waste is packed into steel drums. Soft low-level waste is packed into 200 litre drums, which are then compacted to about half their original size and packed into concrete boxes. Low-level scrap metal waste is cut up or crushed and packed directly into the concrete boxes. The ion-exchange resins are dried and solidified with bitumen, and then cast into 200 litre drums. These drums are also packed into concrete boxes.

The repository for low and medium level waste "VLJ repository" is on the Olkiluoto site. Packed into concrete boxes, the waste is transported by a radiation-shielded vehicle into the repository, where it is transferred to low and medium level silos excavated into the bedrock at a depth of 60 to 100 metres. There is also a separate space in the VLJ repository for storing the small quantities of radioactive waste that are generated as a result of scientific research and health care in Finland. The VLJ repository will also house irradiated equipment and construction material when the respective nuclear facilities are decommissioned. In November 2012, the Government granted TVO a licence amendment for the final disposal of low and medium level nuclear waste from OL3 EPR in the VLJ repository. The expansion of the VLJ repository is estimated to take place in the 2030s, when there will be no more room left in the existing final disposal silos.

TVO and Fortum Power and Heat Oy own a company, Posiva Oy, which will dispose of high-level nuclear waste from the Olkiluoto nuclear power plants (OL1, OL2 and OL3 EPR) owned by TVO and the Loviisa nuclear power plants (Loviisa 1 and Loviisa 2) owned by Fortum Power and Heat Oy (the high-level waste will be stored for approximately 40 years in interim storage facilities on site at the respective nuclear power plants). Posiva Oy will dispose of the nuclear waste at a purpose-built nuclear waste repository. TVO's operations (OL1, OL2 and OL3 EPR) will account for approximately 74 percent of the waste deposited at the site, and TVO will contribute the same proportion of the costs. The spent nuclear fuel will be packed into copper/cast iron canisters and stored approximately 420 metres below ground.

Posiva Oy submitted an application to the Finnish Government regarding the construction licence for the final disposal repository for spent nuclear fuel in December 2012 (although the application has been supplemented by additional clarifications). In its statement submitted to the MEE in February 2015, the STUK noted that the encapsulation plant and

final disposal facility designed by Posiva Oy could safely be constructed as a repository for spent nuclear fuel. STUK's safety assessment is required for the decision on the construction licence that MEE will propose to the Finnish Government. The Finnish Government granted a construction licence for Posiva Oy's final disposal repository and encapsulation plant in November 2015. After STUK issued a decision in November 2016 confirming that Posiva Oy was in a position to initiate the works under the construction licence, Posiva Oy began the construction of the final disposal facility for spent nuclear fuel.

Excavation of the vehicle access tunnels leading to the final disposal facility, technical rooms and excavation of the central tunnel for the integrated systems test were completed in 2018. The full-scale in-situ system test ("FISST") was commenced in the final disposal repository at the end of June 2018 and the backfilling is already completed. The aim of the FISST is to demonstrate that safe final disposal concept can be implemented as designed by Posiva Oy. The test will be monitored for several years.

#### *Nuclear Waste Management – Funding*

In Finland, the future costs of the final disposal of spent fuel, the management of low and intermediate-level radioactive waste and nuclear power plant decommissioning are provided for by the Nuclear Waste Management Fund to which nuclear power plant operators make annual contributions. MEE calculates annually TVO's total liability for nuclear waste management and the contribution TVO must make to the Nuclear Waste Management Fund based on the actual total cost of containing the nuclear waste over time.

As at 31 March 2019, TVO's legal liability for nuclear waste management according to the Nuclear Energy Act was EUR 1,505.8 million (compared with EUR 1,481.6 million as at 31 March 2018) and TVO's funding target obligation for 2019 to the Nuclear Waste Management Fund was EUR 1,505.8 million (compared with EUR 1,470.8 million for 2018). As at 31 March 2019, TVO's share in the Nuclear Waste Management Fund was EUR 1,505.8 million. The difference between TVO's legal liability calculated according to the Nuclear Energy Act and TVO's funding target obligation is covered by collateral securities. The liabilities in the consolidated financial statements show a provision related to nuclear waste management liability of EUR 956.6 million as at 31 March 2019 (compared with EUR 959.7 million as at 31 March 2018), calculated according to IFRS. A corresponding amount, under assets, represents TVO's share in the Nuclear Waste Management Fund. TVO utilises the right to borrow funds back from the Nuclear Waste Management Fund in accordance with the law. As at 31 March 2019, the amount of the loan was EUR 591.4 million. The loan has been relented to TVO's A-series shareholders.

According to the Nuclear Energy Act, TVO shall, prior to the commencement of the waste generating OL3 EPR operation, supply the Finnish State with collateral securities/funds to cover its waste management obligation in relation to the OL3 EPR. It has been estimated by TVO that at commissioning, the OL3 EPR nuclear waste management liability will be approximately EUR 400 million. Collateral securities are expected to be provided by TVO's shareholders.

Although TVO's contributions to the Nuclear Waste Management Fund are calculated to cover estimated future costs of the final disposal of spent fuel; the management of low and medium level radioactive waste; and plant decommissioning (and includes a safety margin in respect of such estimated future costs), the possibility exists that actual costs could exceed the provisions of the Nuclear Waste Management Fund. If this were to occur, TVO would be responsible for its proportion of any such excess costs.

#### *Nuclear Liability - Current and Temporary Regime*

Under the Finnish Nuclear Liability Act (484/1972, as amended; *Fi: ydinvastuulaki*) and its temporary amendment (581/2011, as amended; *Fi: laki ydinvastuulain väliaikaisesta muuttamisesta*)<sup>(1)</sup> (the "FNLA"), TVO has strict third-party liability in relation to nuclear accidents. According to the temporary amendment, the liability of the plant operator is unlimited for nuclear damage suffered in Finland caused by a single nuclear incident but limited to a maximum amount of 600 million Special Drawing Rights (corresponding to approximately EUR 730 million) for nuclear damage suffered outside of Finland. TVO is obliged under statute to have private insurance to cover up to this amount. TVO maintains insurance in compliance with its statutory obligations, in addition to which TVO maintains separate insurance to cover its operations. TVO's liability is insured up to 600 million Special Drawing Rights for each nuclear incident that may occur during each insurance period. In addition, TVO maintains insurance to cover any non-nuclear damage of up to EUR 420,500 under the corresponding legislation.

#### *Nuclear Liability - New Regime*

The provisions of the FNLA are mainly based on the international Paris and Brussels conventions. The parties to those conventions agreed to modify the conventions in February 2004. In Finland, the amendment of the FNLA to incorporate

(1) The temporary amendment to the Finnish Nuclear Liability Act entered into force on 1 January 2012 and will remain in force until the date on which the Act amending the Finnish Nuclear Liability Act (493/2005) enters into force either in its entirety or with exceptions.



such modifications to the Paris and Brussels conventions was approved by Parliament in 2005; however, this has not yet been implemented into domestic legislation in its entirety, as the revised Paris and Brussels conventions will only come into force when two thirds of the undersigned countries have ratified the amendments. In most of the countries, this procedure has not yet been completed and, therefore, it is difficult to forecast when the amendments will come into force. However, some of the approved modifications entered into force in Finland in 2012 by the temporary amendment, when the Finnish Parliament temporarily amended new provisions of the FNLA relating to: the plant operator's unlimited liability for nuclear damage suffered in Finland; its insurance obligation of up to 600 million Special Drawing Rights; and a new maximum limited amount of the liability of the plant operator for nuclear damage suffered outside of Finland.

The agreed modifications to the conventions will not increase the insurance obligation on TVO as it already exists under the temporary regime. Instead, the liability of the Finnish Government would increase and it would compensate for any damages exceeding EUR 700 million and up to a limit of EUR 1,200 million (*i.e.*, a maximum liability to the Finnish Government of EUR 500 million). Thereafter, the compensation community (composed of the countries which are party to the Paris and Brussels conventions) will be liable for further damages of up to EUR 300 million for any nuclear incident, so that the total maximum amount of compensation would be EUR 1,500 million.

Under the new regime, there will be no limit on the liability of a nuclear power operator for damage that has occurred within Finland. Therefore, TVO will be liable for the cost of any damage up to EUR 700 million (up to which amount it will be required by statute to be insured) for any damage occurring either inside or outside of Finland. For damage occurring outside of Finland, TVO's liability will be capped at this amount, however, as there is no limit on liability for damage occurring inside Finland, TVO will be liable for the cost of any such damage where the cost exceeds EUR 1,500 million (TVO will not be required by statute to be insured for such amounts).

### ***Coal Power***

TVO has a 45 percent holding in the Meri-Pori coal-fired power plant operated by Fortum Power and Heat Oy (which also owns the remaining share of the power plant). TVO is entitled to a share of the plant's capacity corresponding to its holding and is responsible for providing the coal required to produce such share of the capacity. Operating the plant is the responsibility of Fortum Power and Heat Oy.

TVO's share of the amount of electricity produced at the Meri-Pori coal-fired power plant was 659.7 GWh in 2018 (compared to 130.7 GWh in 2017). In order to produce TVO's share, 242.2 thousand tonnes of coal was used in 2018 (compared to 46.7 thousand tonnes in 2017) and 524.3 thousand tonnes of carbon dioxide emissions rights were used in 2018 (compared to 120.7 thousand tonnes in 2017).

TVO buys the emission rights in the open market. In 2018, TVO acquired emission rights worth EUR 8.7 million (compared to EUR 0.7 million in 2017).

TVO and its shareholders have agreed on ownership arrangements of shares entitling to a share of Meri-Pori power plant's production capacity. TVO will relinquish its ownership in the Meri-Pori power plant in full.

According to the agreement signed in June 2018, Fortum Power and Heat Oy will acquire TVO's shareholders' shares of the production capacity of the Meri-Pori power plant. Fortum Power and Heat Oy has been entitled to use TVO's share of the Meri-Pori power plant capacity as of the beginning of 2019, and TVO will relinquish its share in Meri-Pori power plant in full in the beginning of July 2020.

### ***Gas Power***

TVO owns a 50 percent share of the gas turbine power unit at the Olkiluoto plant, which has an installed capacity of 100 MW. The gas unit is a reserve unit and is not currently in operation other than for the purpose of periodic testing.

### **Environment**

TVO's policy is to conduct its operations in accordance with TVO's environmental policy and all applicable environmental permits, and its environmental management system. TVO's environmental management system, which also covers the construction phase of OL3 EPR, complies with the international ISO 14001:2015 standard and is EMAS registered.

TVO has covered its environmental responsibility in a separate report since 1996, and its corporate social responsibility including financial, environmental, and social responsibility, since 2001. The information describing TVO's environmental responsibility is based on reporting abiding by the EMAS Regulation (EC) No 1221/2009. TVO's report for 2016, which provides more detailed information on the environment issues and indicators, was released in February 2017 on TVO's website ([www.tv.fi](http://www.tv.fi)). TVO's Corporate Social Responsibility Report 2016 was verified by DNV GL Business Assurance Finland Oy Ab in January and February 2017 and can also be found on the above-mentioned website.

## Regulatory Environment

The use of nuclear energy is subject to licensing. Applications are made to the Finnish Government for decisions in principle, construction licences and operating licences. STUK is responsible for monitoring the safe use of nuclear energy and it is also responsible for monitoring safety and emergency arrangements and nuclear material in Finland. TVO's environmental management system complies with the international ISO 14001:2015 standard. TVO has the licences relevant to its business, such as, but not limited to, operating licences for OL1, OL2 and OL3 EPR as well as the necessary environmental permits. There is no reason to believe that any of these licences will be revoked. The operating licences for OL1 and OL2 were granted by the Finnish Government in August 1998. On 26 January 2017, TVO submitted to the MEE an application for the renewal of the operating licence of OL1 and OL2 for the period ending at the end of 2038. The Finnish Government approved the extension of the operating licences for OL1 and OL2 units on 20 September 2018 until the end of 2038. The operating licence for OL3 EPR was granted by the Finnish Government on 7 March 2019.

A fundamental principle behind the Finnish legislation on nuclear energy is that its use must be for the overall good of the society as a whole. The main rules on the use of nuclear energy, monitoring of that use and nuclear safety, are contained in the Finnish Nuclear Energy Act and the Nuclear Energy Decree (161/1988, as amended; *Fi: ydinenergia-asetus*), as well as lower level statutes and regulations enacted pursuant to them such as the general safety regulations issued by STUK. The general safety regulations relating to the use of nuclear energy issued by STUK entered into force on 1 January 2016. The general safety regulations of STUK include Regulation on the Safety of a Nuclear Power Plant (*Fi: Säteilyturvakeskuksen määräys ydinvoimalaitoksen turvallisuudesta*, STUK Y/1/2018), Regulation on the Emergency Arrangements of a Nuclear Power Plant (*Fi: Säteilyturvakeskuksen määräys ydinvoimalaitoksen valmiusjärjestelyistä*, STUK Y/2/2018), Regulation on the Security in the Use of Nuclear Energy (*Fi: Säteilyturvakeskuksen määräys ydinenergian käytön turvajärjestelyistä*, STUK Y/3/2016), Regulation on the Safety of Disposal of Nuclear Waste (*Fi: Säteilyturvakeskuksen määräys ydinjätteiden loppusijoituksen turvallisuudesta*, STUK Y/4/2018) and Regulation on the Safety of Mining and Milling Operations Aimed at Producing Uranium or Thorium (*Fi: Säteilyturvakeskuksen määräys uraanin tai toriumin tuottamiseksi harjoitettavan kaivostoiminnan ja malminrikastustoiminnan turvallisuudesta*, STUK Y/5/2016). The STUK regulations replaced the Government Decrees in force earlier, including the Finnish Government Decree on the Safety of Nuclear Power Plants (717/2013; *Fi: valtioneuvoston asetus ydinvoimalaitoksen turvallisuudesta*), the Finnish Government Decree on the Security in the Use of Nuclear Energy (734/2008; *Fi: valtioneuvoston asetus ydinenergian käytön turvajärjestelyistä*), the Finnish Government Decree on the Emergency Response Arrangements of Nuclear Power Plants (716/2013; *Fi: valtioneuvoston asetus ydinvoimalaitoksen valmiusjärjestelyistä*), and the Finnish Government Decree on the Safety of Disposal of Nuclear Waste (736/2008; *Fi: valtioneuvoston asetus ydinjätteiden loppusijoituksen turvallisuudesta*) were repealed as of 1 January 2016, and the new general safety regulations of STUK took effect at the same time. The repeal of the aforementioned Decrees and the new general safety regulations of STUK are not expected to have a material effect on TVO's operations. In addition, the FNLA regulates the liability of an operator in charge of a nuclear plant in the event of a nuclear accident. No such changes in the regulatory framework are foreseeable that would significantly affect the operation of TVO.

Additional regulations pertaining to the exploitation of nuclear energy are set out in the Finnish Radiation Act (859/2018; *Fi: säteilylaki*) as well as lower level statutes enacted pursuant to the Radiation Act. The new Radiation Act, among others, transposed the Directive 2013/59/EURATOM of the European Council of 5 December 2013 into national law in Finland.

TVO maintains insurance for nuclear liability in accordance with requirements of Finnish laws and regulations that are based on the international conventions on nuclear liability to which Finland is a party.

As a result of the European Commission's review of safety measures in the nuclear industry, certain legislative amendments have been made which aim to strengthen the powers and independence of national safety authorities and introduce EU-wide safety objectives. See "*Risk Factors—Risks related to Nuclear Operations of TVO—A failure by TVO to comply with applicable regulations could result in interruption of its operations and have a material adverse effect on its business and financial position*". Changes to the European legislative landscape have precipitated changes at a domestic level.

At the end of 2017, the Finnish Parliament passed an act to amend the Nuclear Energy Act (HE 93/2017). Regulations regarding a new license on decommissioning nuclear facilities issued by the Finnish Government were added to the Act. The license would be valid until further notice. The new legislation also enforced the new directive on the amendment of the nuclear safety directive. Licensee's responsibility to ensure the compliance of products and services produced by suppliers and subcontractors that are significant from the viewpoint of nuclear safety of the facility was also included in the regulations. The amendments came into force on 1 January 2018. It is expected by TVO that the new legislation would not significantly affect the operation of TVO.

The previous amendments to the Finnish Nuclear Energy Act came into force on 16 May 2017 in respect of the handling of license applications in relation to nuclear installations. The amendments came into force due to the enforcement of the new Act on Environmental Impact Assessment Procedure (252/2017; *Fi: laki ympäristövaikutusten arviointimenettelystä*), implementing the Environmental Impact Assessment Directive (2014/52/EU). It is expected by TVO that the legislation will not significantly affect the operation of TVO. The changes in the Finnish Nuclear Energy Act that took effect on

1 January 2016 increased the nuclear safety research fee collected from the operators of nuclear facilities and waste management fee collected from those liable for waste management with different fee levels for fixed periods from 2016 to 2020 and from 2021 to 2025. For TVO this means an increase in fees by an additional EUR 4 million per year during the period from 2016 to 2020.

Additionally, STUK's regulatory guides on nuclear safety ("**YVL Guides**") came into force at the beginning of December 2013. All YVL Guides were revised in the course of 2017 and 2018 to correspond to the recent national and international legislative amendments. The YVL Guides are applied as they stand to all new nuclear power plant units. The adoption of the YVL Guides and their revisions with regard to existing nuclear power plant units, such as OL1 and OL2, was subject to separate STUK decisions. With regard to OL1 and OL2 the YVL Guides were adopted for the most part as of 1 September 2015. The implementation of the YVL Guides to nuclear power facilities currently under construction, such as OL3 EPR, is subject to a separate STUK decision.

In December 2013, the Finnish Parliament approved a tax related to carbon dioxide-free nuclear, hydro and wind power generation. The power plant tax was estimated to have the effect of approximately EUR 6 million on TVO's annual costs. The Finnish Government withdrew the introduction of the new power plant tax in June 2014. The final decision on repealing the tax was made in Parliament in October 2014.

### **Governance of TVO**

Under its Articles of Association, TVO delivers electricity to its shareholders at cost ("**Mankala Principle**"), which means delivering the electricity produced or procured to its shareholders in proportion to their shareholdings in each series of shares. Each of the shareholders of each series bears their share of the variable and fixed annual costs as specified in the Articles of Association. The shareholders have concluded a mutual shareholders' agreement, which contains more detailed regulations on corporate governance.

TVO observes on a voluntary basis the Finnish Corporate Governance Code 2015 (the "**Corporate Governance Code**") for listed companies, issued by the Finnish Securities Market Association in 2015, where applicable. However, TVO is not obliged to observe the Corporate Governance Code nor, therefore, the Corporate Governance Code's "comply or explain" principle.

## SELECTED FINANCIAL INFORMATION

The following tables set forth selected consolidated financial and other information for the Issuer as of and for the years ended December 31, 2018 and 2017. The selected consolidated financial information set forth below has been derived from the Issuer's audited consolidated financial statements as of and for the financial years ended 31 December 2018 and 31 December 2017.

The Issuer's consolidated financial information has been prepared in accordance with the IFRS as adopted by the EU.

The selected consolidated financial information provided herein should be read together with the Issuer's audited consolidated financial statements as of and for the financial years ended 31 December 2018 and 31 December 2017 incorporated by reference into this Listing Prospectus (see "*Documents Incorporated by Reference*").

	For the year ended 31 December	
	2018	2017
	(audited)	
	(EUR in thousands)	
<b>CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME</b>		
<b>Continuing operations</b>		
Sales .....	514,096	453,603
Other operating income.....	2,968	21,968
Materials and services.....	(402,536)	(352,573)
Personnel expenses .....	(9,959)	(10,511)
Depreciation, amortisation and impairment .....	(39,048)	(39,484)
Other operating expenses.....	(53,437)	(52,016)
Share of (loss)/profit of associates and joint ventures.....	(19,535)	(9,424)
<b>Operating profit or loss .....</b>	<b>(7,451)</b>	<b>11,563</b>
Finance income.....	2,728	4,329
Finance costs.....	(27,637)	(14,063)
<b>Finance costs – net .....</b>	<b>(24,909)</b>	<b>(9,734)</b>
<b>Profit before income tax .....</b>	<b>(32,360)</b>	<b>1,829</b>
Income tax expense.....	0	838
<b>Profit for the period from continuing operations .....</b>	<b>(32,360)</b>	<b>2,667</b>
<b>Discontinued operations</b>		
<b>Profit/loss from discontinued operations .....</b>	<b>2,611</b>	<b>(1,570)</b>
<b>Profit for the period .....</b>	<b>(29,749)</b>	<b>1,097</b>
<b>Other comprehensive income:</b>		
Items, that may be reclassified later to profit or loss		
Share of other comprehensive income of associates		
Changes in the fair value of available-for-sale financial assets.....	0	(8)
Cash flow hedging .....	4,166	(5,369)
Other comprehensive income for the period.....	4,166	(5,377)
<b>Total comprehensive income for the period.....</b>	<b>(25,583)</b>	<b>(4,280)</b>
<b>Profit attributable to:</b>		
Owners of the parent.....	(29,098)	(10,392)
Non-controlling interest.....	(651)	11,489
<b>Profit for the period.....</b>	<b>(29,749)</b>	<b>1,097</b>
<b>Total comprehensive income attributable to:</b>		
Owners of the parent.....	(24,932)	(15,769)
Non-controlling interest.....	(651)	11,489
<b>Total comprehensive income for the period.....</b>	<b>(25,583)</b>	<b>(4,280)</b>

	<b>As of 31 December</b>	
	<b>2018</b>	<b>2017</b>
	<b>(audited)</b>	
	<b>(EUR in thousands)</b>	
<b>CONSOLIDATED BALANCE SHEET</b>		
<b>ASSETS</b>		
<b>Non-current assets</b>		
Intangible assets.....	284,173	283,364
Property, plant and equipment.....	497,440	531,077
Investments in associated companies and joint ventures.....	714,625	744,184
Available-for-sale financial assets.....	486	505
Loans and other receivables.....	<u>446,034</u>	<u>385,962</u>
<b>Non-current assets total.....</b>	<b><u>1,942,758</u></b>	<b><u>1,945,092</u></b>
<b>Current assets</b>		
Inventories.....	12,038	5,190
Trade and other receivables.....	84,399	86,452
Cash and cash equivalents.....	<u>59,598</u>	<u>43,857</u>
<b>Current assets total.....</b>	<b><u>156,035</u></b>	<b><u>135,499</u></b>
Assets held for sale.....	<u>4,653</u>	<u>8,845</u>
<b>Total assets.....</b>	<b><u>2,103,446</u></b>	<b><u>2,089,436</u></b>
<b>EQUITY</b>		
<b>Equity attributable to owners of the parent</b>		
Share capital.....	65,293	65,293
Share premium.....	216,822	216,822
Reserve for invested non-restricted equity.....	326,683	328,869
Revaluation reserve.....	1,700	(2,466)
Retained earnings.....	<u>165,879</u>	<u>192,792</u>
<b>Equity attributable to owners of the parent, total.....</b>	<b><u>776,377</u></b>	<b><u>801,310</u></b>
<b>Non-controlling interests.....</b>	<b><u>40,515</u></b>	<b><u>42,197</u></b>
<b>Total equity.....</b>	<b><u>816,892</u></b>	<b><u>843,507</u></b>
<b>LIABILITIES</b>		
<b>Non-current liabilities</b>		
Provisions.....	3,345	4,491
Deferred tax liabilities.....	0	0
Borrowings.....	1,107,672	1,040,611
Other non-current liabilities.....	<u>6,293</u>	<u>2,993</u>
<b>Non-current liabilities total.....</b>	<b><u>1,117,310</u></b>	<b><u>1,048,095</u></b>
<b>Current liabilities</b>		
Borrowings.....	114,533	140,126
Trade and other payables.....	<u>54,711</u>	<u>57,708</u>
<b>Current liabilities total.....</b>	<b><u>169,244</u></b>	<b><u>197,834</u></b>
Liabilities related to assets held for sale.....	<u>0</u>	<u>0</u>
<b>Total liabilities.....</b>	<b><u>1,286,554</u></b>	<b><u>1,245,929</u></b>
<b>Total equity and liabilities.....</b>	<b><u>2,103,446</u></b>	<b><u>2,089,436</u></b>

**As of and for the  
year ended 31 December**

**2018                      2017**

**(audited)**

**(EUR in thousands)**

**CONSOLIDATED CASH FLOW STATEMENT**

**Cash flows from operating activities**

Profit for the period.....	(32,360)	2,667
Adjustments to the profit for the period.....	83,058	42,563
Change in net working capital.....	(8,949)	(447)
Interest paid and other financial expenses.....	(12,651)	(14,768)
Interest received.....	2,584	2,278
Income tax paid.....	(4)	36
<b>Net cash generated from operating activities.....</b>	<b>31,678</b>	<b>32,329</b>

**Cash flows from investing activities**

Proceeds from sales of shares in participating interests.....	2	0
Purchases of intangible assets and property, plant and equipment (PPE).....	(5,538)	(6,458)
Proceeds from sales of intangible assets and PPE.....	265	6,738
Proceeds from sales of available-for-sale financial assets.....	15	0
Proceeds from sales of subsidiaries.....	0	16,685
Equity refunds received.....	3,310	0
Loan repayments.....	0	2,264
Loans granted.....	(60,232)	(60,231)
Proceeds (+) or repayments (-) of short-term investments.....	0	0
Dividends received.....	7	8
<b>Net cash used in investing activities.....</b>	<b>(62,171)</b>	<b>(40,994)</b>

**Cash flows from financing activities**

Proceeds from issuance of ordinary shares.....	0	49,305
Acquisition of own shares.....	0	(296)
Proceeds from borrowings.....	125,000	510,000
Repayments of borrowings.....	(44,854)	(538,493)
Repayments of finance leases.....	(13,791)	(13,649)
Proceeds (+) or repayments (-) of current liabilities.....	(24,889)	(27)
Dividends paid.....	(311)	(15,304)
<b>Net cash used in financing activities.....</b>	<b>41,155</b>	<b>(8,464)</b>

<b>Net increase (decrease) in cash and cash equivalents.....</b>	<b>10,662</b>	<b>(17,129)</b>
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**Cash and cash equivalents at beginning of year**

<b>Cash and cash equivalents at beginning of year</b>	<b>33,885</b>	<b>52,866</b>
Change in cash and cash equivalents	10,662	(17,129)
Cash and cash equivalents of subsidiaries sold	-	(1,852)

<b>Cash and cash equivalents at end of period, continuing operations</b>	<b>44,547</b>	<b>33,885</b>
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<b>Cash and cash equivalents, discontinued operations</b>	<b>15,051</b>	<b>9,972</b>
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<b>Cash and cash equivalents at end of year</b>	<b>59,598</b>	<b>43,857</b>
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## SHAREHOLDERS

The Issuer is owned by Finnish industrial companies as well as private and municipal energy companies. As of the date of this Listing Prospectus, the Issuer has 19 shareholders, and its share capital is divided into 14 share series, 12 of which relate to a specific energy acquisition resource. The following table sets forth the shareholders of the Issuer and their respective shareholdings in the Issuer:

Shareholder	Ownership percent calculated of all the shares in the Issuer
UPM Energy Ltd <sup>(1)</sup> .....	47.7
Stora Enso Oyj.....	15.6
Kymmivoima Oy.....	5.9
EPV Energy Ltd.....	5.5
Kemira Oyj and Eläkesäätiö Neliapila.....	5.1
Metsä Group (Metsäliitto Cooperative, Metsä Fibre Oy, Metsä Board Corporation).....	3.7
UPM Communication Papers Ltd <sup>(1)</sup> .....	3.5
Perhonjoki Ltd.....	2.2
Kokkolan Energia Oy.....	1.8
Ilmarinen Mutual Pension Insurance Company.....	1.8
Yara Suomi Oy and Yara Suomen Eläkesäätiö.....	1.8
Etelä-Suomen Voima Oy.....	1.5
Porin kaupunki.....	1.4
Oulun Energy Ltd.....	0.9
Myllykoski Corporation <sup>(1)</sup> .....	0.6
Helen Ltd.....	0.6
Vantaa Energy Ltd.....	0.2
Outokumpu Oyj.....	0.1
Rautaruukki Corporation.....	0.1
<b>Total</b> .....	<b><u>100.0</u></b>
<b>Shareholders by sector</b>	
Forest industry.....	71
Energy companies.....	19
Chemical industry.....	7
Other.....	3
<b>Total</b> .....	<b><u>100</u></b>

(1) Wholly-owned subsidiary of UPM-Kymmene Corporation.

The Shareholders' Agreement includes provisions on, among other things, the shareholders' rights and obligations. Taking into consideration both the Issuer's Articles of Association and the Shareholders' Agreement, which state the basis for the decision making and governance of the Issuer, none of the shareholders are deemed to have control over the Issuer. For more information, see "*Information about PVO—Operating Model of the Issuer*" and "*—Shareholders' Agreement Relating to the Issuer*" below.

### Shareholders' Agreement Relating to the Issuer

Pursuant to the Shareholders' Agreement, its provisions prevail over the Issuer's Articles of Association in matters concerning the relationships between the parties to the Shareholders' Agreement. Pursuant to the Issuer's Articles of Association, the Board of Directors of the Issuer consists of no less than five and no more than 13 members. Pursuant to the Shareholders' Agreement, shareholders' right to appoint members is determined based on the amount of shares owned, with the largest shareholder having the right to appoint two ordinary members and two deputy members, the five next largest shareholders having the right to appoint one ordinary and one deputy member each and the rest of the shareholders together having the right to appoint two ordinary and two deputy members. In addition, each shareholder that owns at least 3 percent of the Issuer's shares that entitle their holder to receive nuclear power has the right to appoint one ordinary member. As the maximum number of members of the Board of Directors of the Issuer cannot be exceeded, the right to appoint a member is determined based on the amount of shares owned. Pursuant to the Shareholders' Agreement, the largest shareholder of the Issuer has the right to appoint the Chairman of the Board of Directors from the chosen members and the second largest shareholder of the Issuer has the right to appoint the Deputy Chairman of the Board of Directors.

According to the Issuer's Articles of Association and the Shareholders' Agreement, certain amendments to the Articles of Association of the Issuer require unanimous decision by the shareholders of the Issuer. Certain major decisions, such as major transactions, share issues and repurchase of own shares, require at least three-quarters of the votes cast at the relevant General Meeting of Shareholders and at least three-quarters of the votes cast in respect of the series of the Issuer's shares

that the decision concerns, as the case may be. In addition, certain decisions relating to the production companies require at least a majority of the votes cast at the relevant General Meeting of Shareholders and at least three-quarters of the votes cast in respect of the series of the Issuer's shares that the decision concerns.

According to the Issuer's Articles of Association and the Shareholders' Agreement, the shares in the Issuer are not freely transferable to third parties. The purchase of shares in the Issuer requires an approval from the Board of Directors of the Issuer. If a shareholder wishes to transfer its shares in the Issuer, other shareholders have a pre-emption right to such shares in accordance with the Issuer's Articles of Association and the Shareholders' Agreement.



## GOVERNANCE OF THE ISSUER

The Issuer is a public limited liability company incorporated and domiciled in Finland. The Issuer's governance is based on the Finnish Companies Act (624/2006, as amended; *Fi: osakeyhtiölaki*) (the "Finnish Companies Act"), its Articles of Associations and the Shareholders' Agreement, which give more detailed stipulations on the PVO Group's governance. See "Shareholders—Shareholders' Agreement Relating to the Issuer". Even though the Issuer is a non-listed company, it observes the Corporate Governance Code, where applicable. However, the Issuer is not obliged to observe the Corporate Governance Code nor, therefore, the Corporate Governance Code's "comply or explain" principle.

### General Meeting of Shareholders

Shareholders participate in the control and management of the Issuer through resolutions passed at the General Meetings of Shareholders. The General Meeting of Shareholders decides on statutory matters. It also elects the members of the Board of Directors, in accordance with the procedure specified in the corporate documents, and issues binding directives to the Board of Directors regarding the elections of the Board members of the PVO Group companies and any significant investments.

Pursuant to the Articles of Association, the Annual General Meeting of Shareholders also elects the members of the Board of Directors and the auditor and decides on the remuneration of the members of the Board of Directors.

### Management and Administration

#### Board of Directors

Under the Articles of Association, the Issuer's Board of Directors consists of a minimum of five and a maximum of 13 ordinary members. The members of the Board of Directors are elected on an annual basis for a term beginning after the close of the General Meeting of Shareholders executing the election and ending at the close of the next General Meeting of Shareholders executing the election. According to the Articles of Association, a personal deputy member may be elected to each member of the Board of Directors.

According to the Articles of Association, the Board of Directors is responsible for managing the administration of the Issuer and arranging its operations appropriately and for supervising that the operations of the Issuer are carried out in accordance with the law, the Articles of Associations and directives and decisions by the General Meeting of Shareholders. In addition, the Board of Directors decides, unless it has authorised the President and CEO to do so, on purchases and sales of real estate and other investments and on borrowing and granting security. The Board of Directors discusses and approves, for example, the code of conduct and the policies defining corporate responsibility and risk management of the Issuer. The Board of Directors annually assesses its own activities. The Board of Directors has prepared a written charter including the Board's main tasks and operating principles.

The Annual General Meeting of Pohjolan Voima Oyj was held on 21 March 2019. The Annual General Meeting elected the following nine persons as members of the Board of Directors and the following nine persons as their personal deputy members.

The following table sets forth the members of the Board of Directors as of the date of this Listing Prospectus:

Name	Position	Born	Qualifications	Other positions of trust
<b>Ordinary members</b>				
Tapio Korpeinen / Chairman of the Board.....	UPM-Kymmene Corporation, Chief Financial Officer; Executive Vice President, UPM Energy Oy	1963	M.Sc. (Tech.), MBA	Vice Chairman of the Board: Kemijoki Oy Member of the Board: TVO Member of the Supervisory Board: Varma Mutual Pension Insurance Company
Seppo Parvi / Deputy Chairman.....	Chief Financial Officer, Deputy to the CEO and Country Manager, Stora Enso Oyj	1964	M.Sc. (Econ.)	Deputy Chairman of the Board: Finnish Forest Industries Federation Member of the Board: Ilmarinen Mutual Pension Insurance Company
Rami Vuola / Board Member .....	President & Chief Executive Officer, EPV Energy Ltd	1968	M.Sc. (Eng.)	Chairman of the Board: EPV Alueverkko Oy, EPV Bioturve Oy, EPV Tase Oy, EPV Tuulivoima Oy, PVO Huippuvoima Oy, Rajakiiri Oy, Tornion Voima Oy, Vaskiluodon Teollisuuskiinteistöt Oy Member of the Board: LeaseGreen Group Oy, Raahen Voima Oy, Suomen Energiavarat Oy, Suomen Merituuli Oy, TVO, Vaskiluodon Voima Oy, Voimapiha Oy

<b>Name</b>	<b>Position</b>	<b>Born</b>	<b>Qualifications</b>	<b>Other positions of trust</b>
Jukka Hakkila / Board Member.....	Group General Counsel and Deputy to the CEO, Kemira Oyj	1960	LL.M.	–
Anders Renvall / Board Member ....	Managing Director, Kymppivoima Oy	1973	M.Sc. (Eng.)	Chairman of the Board: Voimapiha Oy, Voimapiha Ab, PVO-Lämpövoima Oy Member of the Board: TVO, EPV Energy Ltd, Vattenfall Indalsälven Ab, Vaskiluodon Voima Oy
Esa Kaikkonen/ Board Member .....	CEO, Metsä Tissue Corporation	1969	LL.M.	Member of the Board: Metsä Fibre Oy, TVO, Finnish Forest Industries Federation and Federation of the Finnish Woodworking Industries (FIF)
Tomi Sederholm/ Board Member ...	Head of Finance & Control and Strategy, UPM Energy Oy	1981	M.Sc. (Econ.)	–
Mikael Surakka / Board Member	Energy Manager, Outokumpu Oyj	1968	M.Sc. (Eng.)	–
Mikko Rintamäki / Board Member	CEO, Kokkolan Energia Oy	1963	B.Sc. (Eng.), MBA	Member of the Board: KIP Infra Oy, Power-Deriva Oy, Solar Power Holding Oy
<b>Deputy members</b>				
Jussi Pesonen Personal substitute for Tapio Korpeinen.....	President and CEO, UPM-Kymmene Corporation	1960	M.Sc. (Eng.)	Chairman of the Board; Finland Chamber of Commerce and ICC Finland, Finnish Forest Industries Federation (FFIF) Member of the Board: Confederation of European Paper Industries (CEPI), East Office of Finnish Industries Oy, UPM-Kymmene Corporation
Markus Mannström, Personal substitute for Seppo Parvi .....	Executive Vice President, Division Biomaterials, Stora Enso Oyj	1963	M.Sc. (Paper Tech.)	Member of the Board: TVO
Stefan Damlin, Personal substitute for Rami Vuola.....	CEO, Vaasan Sähkö Oy	1968	M.Sc. (Econ.)	–
Seppo Tuomisto, Personal substitute for Jukka Hakkila.....	Manager, Energy Business Support and Development, Kemira Oyj	1962	M.Sc. (Eng.)	–
Jorma Korhonen, Personal substitute for Anders Renvall .....	Managing Director, Pohjois-Karjalan Sähkö Oy	1957	M.Sc. (Eng.)	Managing Director, Pohjois-Karjalan Energiaholding Oy
Ilkka Hämälä Personal substitute for Esa Kaikkonen.....	President and CEO, Metsä Group	1961	M.Sc. (Eng.)	Member of the Supervisory Board: Mutual Pension Insurance Company Ilmarinen Member of the Advisory Board: Finnish Quality Association
Pekka Tynkkynen, Personal substitute for Tomi Sederholm .....	Director, UPM Energy Oy	1968	M.Sc. (Eng.)	–
Mikko Lepistö, Personal substitute for Mikael Surakka .....	Energy Manager, SSAB Europe Oy	1976	M.Sc. (Eng.)	–
Roger Holm, Personal substitute for Mikko Rintamäki .....	CEO, Oy Herrfors Ab	1967	M.Sc. (Eng.), Lic.Sc. (Econ.)	–

### ***Board Committees***

The Board of Directors has established an Audit and Finance Committee and a Remuneration and Nomination Committee, assisting and reporting to the Board of Directors and consisting of at least three members of the Board. The Board of Directors nominates the members of the committees, appoints their chairman and approves each Committee's charter.

The Audit and Finance Committee provides assistance to the Board of Directors in processing and preparing matters that are the responsibility of the Board of Directors concerning financing, financial reporting, monitoring and auditing.

The members of the Board Committees are:

#### *Audit and Finance Committee*

Tapani Sointu	Chairman
Jukka Hakkila	Member
Rami Vuola	Member

#### *Remuneration and Nomination Committee*

Tapio Korpeinen	Chairman
Seppo Parvi	Member
Anders Renvall	Member

In addition to the two Committees referred to above, the Board of Directors nominates certain other committees to assist the Board of Directors and the Corporate Executive Team when deemed necessary.

### ***President and CEO***

The President and CEO deals with the Issuer's day-to-day management in accordance with the Finnish Companies Act and the instructions and orders issued by the Board of Directors.

Ilkka Tykkyläinen (1966) serves as the Issuer's President and CEO. He holds a M.Sc. (Eng.). He serves as the Chairman of the Board of Directors of TVO and as a member of the Boards of Directors of Alholms Kraft AB, PVO-Vesivoima Oy and PVO-Lämpövoima Oy.

### ***Corporate Executive Team***

In operational management, the President and CEO is supported by the Corporate Executive Team, which discusses the main principles related to the operations of the PVO Group and the Issuer.

The Corporate Executive Team comprises of the following members:

Ilkka Tykkyläinen	President and CEO, Chairman
Petri Hurri	Executive Vice President, Thermal Power; President of PVO-Lämpövoima Oy and PVO Huippuvoima Oy and the Chairman of the Board of Directors of several PVO Group companies.
Minna Laakso	Chief Financial Officer; Corporate Planning, Finance; A member of the Board of Directors of several PVO Group companies.
Riitta Larnimaa	Executive Vice President, Communications and Public Affairs; Chairman of the Electricity Production Committee of the Finnish Energy Industries.
Tiina Nyström	General Counsel, Executive Vice President; Human Resources and Legal Affairs, Properties and Corporate Security
Pertti Pietinen	Executive Vice President, Hydropower; Chairman or a member of the Board of Directors of several PVO Group companies.

### ***Business Address***

The business address of the members of the Board of Directors and the Corporate Executive Team is c/o Pohjolan Voima Oyj, Töölönkatu 4, FI-00100 Helsinki, Finland.

## **Internal Control, Risk Management and Internal Auditing**

The Board of Directors and the management are responsible for the Issuer's internal control and risk management system. The purpose of internal control and risk management is to ensure the efficiency and effectivity of the operations, the reliability of information, as well as compliance with the regulations and operating principles. The Issuer's governance and internal control system is based on the Articles of Association, Shareholders' Agreement as well as code of conduct and other company policies, approved by the Board of Directors.

The key principles of risk management are defined in the PVO Group Risk Management policy. Subsidiaries and Group functions are responsible for their own risk management and associated reporting. The management reporting on the comprehensive risk circumstances to the Board of Directors is linked to the strategy and long-term planning process. The Board of Directors oversees the reporting on risk exposures, risk management activities and results related to the Issuer's strategy and operations.

According to the PVO Group's insurance policy, the PVO Group assures its assets and operations against possible financial losses caused by unforeseen events and accidents. Property is insured at replacement value. In addition, the PVO Group maintains insurances with requirements of Finnish laws and regulations or otherwise mandatory obligations. The PVO Group's insurance policy is approved by the Board of Directors of the Issuer.

The operating principles and principal procedures of the Issuer's internal audit have been defined in the audit charter approved by the Board of Directors. Internal audit assists the Issuer in achieving its objectives by providing a systematic approach to evaluate and improve governance processes, risk management and internal control. Internal audit reports functionally under the Audit and Finance Committee and reports summaries of its plans and findings to the Issuer's Board of Directors.

### **Absence of Conflicts of Interest**

Provisions regarding conflicts of interest of the management of a Finnish company are set forth in the Finnish Companies Act. Pursuant to Chapter 6, Section 4 of the Finnish Companies Act, a member of the Board of Directors may not participate in the handling of a contract between himself/herself and the company, nor may he/she participate in the handling of a contract between the company and a third party if he/she may thereby receive a material benefit which may be in contradiction with the interests of the company. The above provision regarding contracts shall correspondingly apply to other legal acts and to other legal proceedings and other similar matters. The same provisions are applied with regard to the President and CEO.

None of the members of the Board of Directors, the President and CEO or the other members of the Corporate Executive Team have any conflicts of interests between any duties to the Issuer and their private interests and/or their other duties.

## TERMS AND CONDITIONS OF THE NOTES

### Pohjolan Voima Oyj EUR 125,000,000 1.750 percent Fixed Rate Notes due 2023

#### ISIN CODE FI4000327820

The Board of Directors of Pohjolan Voima Oyj (the “**Issuer**”) has in its meeting on May 25, 2018 authorised the Issuer’s management to decide on the issue of senior unsecured notes referred to in Paragraph 1 of Section 34 of the Act on Promissory Notes (622/1947, as amended in 746/1993, *Fi: velkikirjalaki*). Based on the authorisation, the Issuer has decided to issue senior unsecured notes (the “**Notes**”) on the terms and conditions specified below.

OP Corporate Bank plc and Handelsbanken Capital Markets, Svenska Handelsbanken AB (publ) will act as lead managers in connection with the offer and issue of the Notes (the “**Lead Managers**”).

#### 1. PRINCIPAL AMOUNT AND ISSUANCE OF THE NOTES

The principal amount of the Notes is EUR 125,000,000 (EUR 125,000,000) or a higher amount, as may be determined by the Issuer. The Issuer may later create and issue further notes having the same terms and conditions as the Notes, as further set out below under Condition 20 (*Further Issues of Notes*).

The Notes will be issued in dematerialised form in the Infinity book-entry securities system of Euroclear Finland Ltd (“**Euroclear Finland**”) in accordance with the Finnish laws and regulations governing book-entry system and book-entry accounts as well as the regulations and decisions of Euroclear Finland, and cannot be physically delivered.

The issue date of the Notes is 8 June 2018 (the “**Issue Date**”).

The Notes will be offered for subscription in a minimum amount of EUR 100,000. The principal amount of each book-entry unit (*Fi: arvo-osuuden yksikkökoko*) is EUR 1,000. The maximum number of the Notes is 125,000 or a higher number should the Issuer decide to increase the maximum principal amount of the Notes.

The issuer agent (*Fi: liikkeeseenlaskijan asiamies*) of the Notes referred to in the regulations of Euroclear Finland (the “**Issuer Agent**”) and the paying agent of the Notes (the “**Paying Agent**”) is OP Corporate Bank plc.

#### 2. SUBSCRIPTION OF THE NOTES

The Notes shall be offered for subscription through a book-building process (*private placement*). The Notes will be offered to investors outside the United States in reliance on Regulation S under the U.S. Securities Market Act of 1933, as amended. The subscription period shall commence and end on 1 June 2018 (the “**Subscription Date**”).

The Notes have a fixed rate of interest and the redemption amount is fixed as described in this Prospectus. Accordingly, no key information document pursuant to Regulation (EU) No. 1286/2014 (the “**PRIIPs Regulation**”) has been prepared by the Issuer.

Bids for subscription shall be submitted during regular business hours to: (i) OP Corporate Bank plc, Gebhardinaukio 1, 00510 Helsinki, Finland, telephone +358 (0)10 252 7970; or (ii) Svenska Handelsbanken AB (publ), Branch Operation in Finland, Handelsbanken Capital Markets, Fixed Income Sales, Itämerenkatu 11-13, FI-00180 Helsinki, Finland, telephone: +358 10 444 6243.

Bids for subscriptions are irrevocable. All subscriptions remain subject to the final acceptance by the Issuer. The Issuer may, in its sole discretion, reject a subscription in part or in whole. The Issuer shall decide on the procedure in the event of over-subscription.

Subscriptions shall be paid for as instructed in connection with the subscription.

Notes subscribed and paid for shall be created by the Issuer Agent and approved by Euroclear Finland in the Infinity book-entry securities system and routed by the Issuer Agent to the respective book-entry accounts of the subscribers on a date advised in connection with the issuance of the Notes in accordance with the Finnish laws and regulations governing book-entry system and book-entry accounts as well as regulations and decisions of Euroclear Finland.

#### 3. ISSUE PRICE

The issue price of the Notes is 99.357 percent.

#### 4. INTEREST

The Notes bear fixed interest at the rate of 1.750 percent per annum (the “**Interest Rate**”). Interest shall be payable annually in arrears commencing on 8 June 2019 and thereafter on each 8 June (each an “**Interest Payment Date**”) until the Maturity Date (as defined below), subject to the Issuer’s redemption of the Notes in accordance with Condition 7.2 (*Voluntary Total Redemption (Call Option)*) or prepayment of the Notes in accordance with Condition 8 (*Change of Control*), 10 (*Excess Secured Indebtedness*) or 12 (*Events of Default*) below.

If the Notes have not been admitted to trading on Nasdaq Helsinki Ltd (“**Nasdaq Helsinki**”) within 12 months after the Issue Date, the Interest Rate applicable to the Notes shall be increased by an additional margin of 1.00 percent per annum and this increase shall become effective on the date which is 12 months after the Issue Date. If, at any time after the first Interest Payment Date, the Notes are admitted to trading on Nasdaq Helsinki, the increase of the Interest Rate set out in the preceding sentence shall be applied until the immediately following Interest Payment Date. Thereafter, the Notes bear interest at the Interest Rate for each consecutive interest period. In case of such increase in the Interest Rate, the Issuer Agent shall inform Euroclear of the increase and amend the terms of the Notes accordingly.

Subject to the Issuer’s redemption of the Notes in accordance with Condition 7.2 (*Voluntary Total Redemption (Call Option)*) or prepayment of the Notes in accordance with Condition 8 (*Change of Control*), 10 (*Excess Secured Indebtedness*) or 12 (*Events of Default*) below, interest shall accrue for each interest period from (and including) the first day of the interest period to (but excluding) the last day of such interest period on the principal amount of Notes outstanding from time to time. The first interest period commences on the Issue Date and ends on the first Interest Payment Date. Each consecutive interest period begins on the previous Interest Payment Date and ends on the following Interest Payment Date. The last interest period ends on the Maturity Date (as defined below).

Interest in respect of the Notes will be calculated on the basis of the actual number of days elapsed in the relevant interest period divided by 365 or, in the case of a leap year, 366 (Actual / Actual ICMA).

#### 5. STATUS AND SECURITY

The Notes constitute direct, unconditional, unsubordinated, unguaranteed and unsecured obligations of the Issuer ranking *pari passu* among themselves and at least *pari passu* with all other present and future unsecured and unsubordinated obligations of the Issuer, save for such obligations as may be preferred by mandatory provisions of law.

#### 6. PAYMENTS

Interest on and principal of the Notes shall be paid in accordance with the Finnish laws and regulations governing book-entry system and book-entry accounts as well as the regulations and decisions of Euroclear Finland.

Should the payment date of interest or principal payable pursuant to these terms and conditions fall on a date which is not a Business Day (as defined below), the payment of the amount due will be postponed to the next following Business Day. The postponement of the payment date shall not have an impact on the amount payable.

In these terms and conditions, “**Business Day**” shall mean a day on which banks in Helsinki are open for general business and on which the Trans-European Automated Real-Time Gross Settlement Express Transfer (TARGET2) System is open.

#### 7. REDEMPTION

##### 7.1 Redemption at Maturity

The Notes shall be repaid in full at their nominal principal amount on 8 June 2023 (the “**Maturity Date**”), unless the Issuer has redeemed the Notes in accordance with Condition 7.2 (*Voluntary Total Redemption (Call Option)*) or prepaid the Notes in accordance with Condition 8 (*Change of Control*), 10 (*Excess Secured Indebtedness*) or 12 (*Events of Default*) below.

##### 7.2 Voluntary Total Redemption (Call Option)

- (a) The Issuer may, if it gives not less than thirty (30) nor more than sixty (60) days’ notice to the Calculation Agent and the holders of Notes (the “**Noteholders**”) in accordance with Condition 15 (*Notices and Right to Information*) (which notice shall be irrevocable and shall specify the Redemption Date), redeem all,

but not only some, of the Notes early on any Business Day from the date falling ninety (90) days after the Issue Date to, but excluding, the first Business Day falling three (3) months prior to the Maturity Date at an amount equal to the sum (in respect of each Note and as determined by the Calculation Agent) of (i) all remaining interest payments from the Redemption Date to the Maturity Date and (ii) the nominal principal amount of the Notes, together with accrued but unpaid interest.

- (b) The Issuer may, if it gives not less than thirty (30) nor more than sixty (60) days' notice to the Noteholders (which notice shall be irrevocable and shall specify the Redemption Date), redeem the Notes, in whole but not in part, at any time from and including the first Business Day falling three (3) months prior to the Maturity Date to, but excluding, the Maturity Date, at an amount equal to 100 percent of their outstanding nominal principal amount together with any accrued but unpaid interest to but excluding to the Redemption Date.

In this Condition 7:

**“Calculation Agent”** means OP Corporate Bank plc or any other investment bank or financial institution selected by the Issuer.

**“Redemption Date”** means the date on which the Notes will be redeemed in accordance with this Condition.

## 8. CHANGE OF CONTROL

If, after the Issue Date, any person or group of persons other than one or more of the shareholders of the Issuer as at the Issue Date or their Affiliates, acting in concert, directly or indirectly, gains control of the Issuer, the Issuer shall promptly notify the Noteholders upon becoming aware of such event in accordance with Condition 15 (*Notices and Right to Information*).

Upon occurrence of a change of control, the Issuer shall, on the CoC Prepayment Date (as defined below), prepay the principal amount of and the interest accrued on the Notes held by the Noteholders who have required prepayment of Notes held by them by a written notice to be given to the Issuer no earlier than thirty (30) Business Days after the publication or the delivery of the notice referred to in the first paragraph of this Condition and no later than twenty (20) Business Days before the CoC Prepayment Date. Interest on the Notes accrues until the CoC Prepayment Date (excluding the CoC Prepayment Date).

If Notes representing more than seventy-five (75) percent of the aggregate principal amount of the Notes have been prepaid on the CoC Prepayment Date pursuant to this Condition 8, the Issuer is entitled to prepay also the remaining outstanding Notes at their principal amount with accrued interest but without any premium or penalty by notifying the relevant Noteholders in accordance with Condition 15 (*Notices and Right to Information*) no later than fifteen (15) Business Days after the CoC Prepayment Date. Such prepayment may be effected at the earliest on the tenth (10th) Business Day following the date of publication of such notice.

In this Condition 8:

**“Affiliate”** means, in relation to any person, a Subsidiary of that person or a Holding Company of that person or any other Subsidiary of that Holding Company.

**“acting in concert”** means a group of persons who, pursuant to an agreement or understanding (whether formal or informal), actively co-operate, through the acquisition by any of them, either directly or indirectly, of shares in the Issuer, to obtain or consolidate control of the Issuer;

**“control”** means either:

- (a) acquiring or controlling the beneficial ownership of shares in the Issuer representing more than fifty (50) percent of the total voting rights represented by the shares in the Issuer; or
- (b) capability of appointing the majority of the board of directors of the Issuer.

**“Holding Company”** means in relation to a person, any other person in respect which it is a Subsidiary.

**“CoC Prepayment Date”** means the date falling seventy (70) Business Days after the publication of the notice referred to in the first paragraph of this Condition.

## 9. NEGATIVE PLEDGE

For so long as any Note remains outstanding, the Issuer shall not, and the Issuer shall procure that none of its Subsidiaries (as defined below under Condition 12 (*Events of Default*)) will, create any mortgage, charge, lien, pledge or other security interest to secure any other notes, bonds or other similar debt securities issued after the Issue Date that would be capable of being listed on a stock exchange or subject to trading in a regulated market (if the Issuer were a public limited liability company) or a multilateral trading facility (“**Debt Instrument Indebtedness**”) (nor create any such security interest to secure any guarantee or indemnity over such notes or other securities), unless the granting of such security interest is required under Finnish law or other law governing such notes, bonds or other debt securities.

## 10. EXCESS SECURED INDEBTEDNESS

If the Issuer or any of its Subsidiaries (as defined below under Condition 12 (*Events of Default*)) encumbers or has encumbered its present or future revenues or assets by placing a Collateral (as defined below) as security, and the amount of the outstanding principal amount of indebtedness secured by such Collateral (when aggregated with the outstanding principal amount of any other indebtedness which has the benefit of any Collateral given by any of its Subsidiaries) exceeds fifteen (15) percent of the Consolidated Total Assets on the date on which such Collateral is created, the Issuer shall promptly notify the Noteholders of such event in accordance with Condition 15 (*Notices and Right to Information*).

The Issuer shall on the Prepayment Date (as defined below) prepay the nominal principal amount of and accrued interest on the Notes, but without any premium or penalty, held by the Noteholders who have required prepayment of the Notes held by them by a written notice to be given to the Issuer no later than fifteen (15) Business Days before the Prepayment Date. Interest on the Notes accrues until the Prepayment Date (excluding the Prepayment Date).

If Notes representing more than seventy-five (75) percent of the aggregate nominal principal amount of the Notes have been prepaid pursuant to this Condition 10 on the Prepayment Date, the Issuer is entitled to prepay also the remaining outstanding Notes at their nominal principal amount with accrued interest but without any premium or penalty by notifying the relevant Noteholders in accordance with Condition 15 (*Notices and Right to Information*) no later than fifteen (15) Business Days after the Prepayment Date. Such prepayment may be effected at the earliest on the tenth (10th) Business Day and at the latest on the sixtieth (60th) Business Day following the date of publication of such notice.

In this Condition 10:

“**assets**” includes present and future properties, revenues and rights of every description;

“**Collateral**” means any mortgage, charge, pledge, lien, assignment by way of security, hypothecation, security interest, trust arrangement or other encumbrance securing any obligation of any person or any other type of preferential arrangement (including, without limitation, title transfer and retention arrangements) having a similar effect. The definition of “Collateral” does not apply to:

- (a) any Collateral existing on the Issue Date;
- (b) liens arising solely by operation of law (or by an agreement evidencing the same) in the ordinary course of its day-to-day trading business;
- (c) any Collateral given in favour of another member of the Group securing only indebtedness owing to one or more members of the Group;
- (d) any Collateral:
  - (A) over assets or revenues situated in Finland granted by the Issuer or any other member of the Group incorporated in Finland to Nordic Investment Bank or European Investment Bank to secure loans made by Nordic Investment Bank or, as the case may be, European Investment Bank; or
  - (B) granted by the Issuer or any other member of the Group to a supranational or specialised public sector financial institution which is required by applicable laws, regulations or directives,



*provided* that, in each case, the total indebtedness and liabilities to which the Collateral listed in sub-paragraphs (A) and (B) above relate do not exceed an aggregate amount of EUR 250,000,000 (or its equivalent in other currencies);

- (e) any Collateral created over all or any part of its right, title or interest in or over the assets of any joint venture partnership or similar venture to secure indebtedness for borrowed money in respect of such venture provided that the total indebtedness and liabilities to which such encumbrances relate does not exceed an aggregate amount of EUR 50,000,000 (or its equivalent in other currencies);
- (f) any Collateral over the property, assets or revenues of any person which is acquired by a member of the Group and becomes a Subsidiary of such member of the Group after the date hereof which exists at the time of such acquisition by such member of the Group provided that the amount thereby secured is not subsequently increased and provided that such Collateral is discharged within 6 months of such acquisition;
- (g) any Collateral created over any asset in connection with financing the acquisition or development of that asset after the date hereof provided that the amount thereby secured is not subsequently increased and provided that such Collateral is discharged within 6 months of the completion of such acquisition or development;
- (h) any title retention arrangements entered into in the ordinary course of its day-to-day trading business;
- (i) Collateral securing indebtedness to the Finnish State Nuclear Waste Management Fund (*Fi: Valtion ydinjätehuoltorahasto*) in respect of indebtedness created pursuant to the terms of the Finnish Nuclear Energy Act (990/1987, as amended, *Fi: ydinenergialaki*) (“**NWFM Indebtedness**”) from time to time and incurred by:
  - (i) the Issuer; or
  - (ii) TVO, but only to the extent the indebtedness so secured is proportionate to the percentage of the Issuer’s ownership in the share capital of TVO. Notwithstanding the foregoing, if TVO on-lends the proceeds of any NWFM Indebtedness to its shareholders other than in proportion to the ownership of the shareholders of TVO in the share capital of TVO, the amount of such NWFM Indebtedness secured by the Collateral granted by members of the Group may not exceed the principal amount subject to on-lending to the Issuer; and
- (j) any Collateral which is a Collateral created in substitution for any other Collateral which secures an amount raised not exceeding the principal amount secured by any existing Collateral permitted by paragraphs (a) to (i) above together with any interest accruing on such amount.

“**Consolidated Total Assets**” means at any time the total assets of the Group at that time determined from the most recent audited consolidated financial statements of the Group.

“**indebtedness**” includes any obligation (whether incurred as principal or as surety for the payment or repayment of money), whether present or future, actual or contingent, excluding Debt Instrument Indebtedness.

“**indebtedness for borrowed money**” in relation to any person means:

- (a) any indebtedness for moneys borrowed or raised by that person or for money owing in respect of any other form of financial accommodation whatsoever made available to that person (excluding normal trade indebtedness);
- (b) any indebtedness under any letter of credit, stand-by letter of credit or note purchase facility or acceptance credit opened on behalf of that person and any receivables purchase factoring or discounting arrangements;
- (c) any indebtedness under any bill discounting facility or bills of exchange on which that person is liable as drawer, acceptor, endorser or otherwise; and
- (d) any other transaction having the commercial effect of borrowing entered into by any person to finance its operations or capital requirements.

a “**person**” includes any individual, firm, company, corporation, government, state or agency of a state or any association, trust, joint venture, consortium, partnership or other entity (whether or not having separate legal personality).

“**Prepayment Date**” means the date falling forty-five (45) Business Days after the publication of the notice referred to in the first paragraph of this Condition 10.

“**TVO**” means Teollisuuden Voima Oyj.

## 11. REPORTS

For so long as the Notes have not been listed in accordance with Condition 18 (*Listing*), the Issuer shall furnish to the Noteholders (in accordance with the last paragraph of this Condition 11):

- (a) within one hundred and twenty (120) days after the end of each financial year, beginning with the financial year ending 31 December 2018, the audited consolidated financial statements of the Group for that financial year containing:
  - (i) the audited consolidated balance sheet of the Issuer as at the end of the most recent financial year and audited consolidated income statements and statements of cash flow of the Issuer for the most recent two financial years, including appropriate notes to such financial statements, for and as at the end of such financial years and the report of the independent auditors on the financial statements;
  - (ii) a description of the management and shareholders of the Issuer, all Material Subsidiary transactions and a description of all material debt instruments;
  - (iii) a description of material risk factors and material subsequent events to the extent required to be reported under the generally accepted accounting principles, standards and practices applied by the Issuer from time to time; and
  - (iv) a description of any material acquisitions, dispositions or recapitalisations that have occurred since the beginning of the most recently completed financial year as to which such annual report relates;
- (b) within sixty (60) days after the end of each half-year period beginning with the half-year period ending on 30 June 2018, the consolidated interim financial statements of the Issuer and its Subsidiaries from time to time for the most recent half year containing:
  - (i) the Issuer’s unaudited condensed consolidated balance sheet as at the end of such period and unaudited condensed statements of income and cash flow for the most recent semi-annual period;
  - (ii) a description of any material acquisitions, dispositions or recapitalisations that have occurred since the beginning of the most recently completed financial year;
  - (iii) an operating and financial review of the unaudited financial statements, including a discussion of the consolidated financial condition, results of operations and material changes in liquidity and capital resources of the Issuer;
  - (iv) a discussion of material changes in material debt instruments since the most recent report; and
  - (v) any material subsequent events and material changes to the risk factors disclosed in the most recent annual report of the Issuer; and
- (c) promptly after the occurrence of a material event that the Issuer announces publicly or any acquisition, disposition or restructuring, merger or similar transaction that is material to the Issuer or its Subsidiaries, taken as a whole, or a senior executive officer or director changes at the Issuer or a change in auditors of the Issuer, a report containing a description of such event. For purposes this sub-clause, an acquisition or disposition shall be deemed to be material if the entity or business acquired or disposed of represents ten (10) percent of the consolidated assets of the Issuer and its Subsidiaries, taken as a whole.

The Issuer shall make available to the Noteholders copies of the reports specified in sub-Conditions (a) – (c) above on the Issuer’s website at the address [www.pohjolanvoima.fi](http://www.pohjolanvoima.fi) or on a website which is available to persons who are registered as investors in accordance with the instructions on the website [www.pohjolanvoima.fi](http://www.pohjolanvoima.fi) or on such other address as provided by the Issuer to the Noteholders in accordance with Condition 15 (*Notices and Right to Information*). The Issuer shall also furnish such reports to the Noteholders upon written request.

## 12. EVENTS OF DEFAULT

If an Event of Default (as defined below) occurs, any Noteholder may by a written notice to the Issuer declare the outstanding principal amount of such Note together with the interest then accrued on such Note to be prematurely due and payable at the earliest on the tenth (10th) calendar day from the date such notice was received by the Issuer *provided* that an Event of Default is continuing on the date of receipt of the notice and on the specified early repayment date. Interest accrues until the early repayment date (excluding the early repayment date).

Each of the following events shall constitute an “**Event of Default**”:

- (a) (Non-Payment: Any amount of interest on or principal of the Notes has not been paid within five (5) Business Days from the relevant due date, unless the failure to pay is caused by a reason referred to in Condition 16 (*Force Majeure*); or
- (b) Cross-default: Any indebtedness for borrowed money of the Issuer or any of its Material Subsidiaries (as defined below) is not paid when due as extended by any originally applicable grace period, or is declared to be due and payable prior to its specified maturity as a result of an event of default (however described), provided that no Event of Default will occur under this sub-Condition (b) if the aggregate amount of such indebtedness due is less than EUR 25,000,000 and provided that it does not apply to any indebtedness owed to a Group Company. A Noteholder shall not be entitled to demand repayment under this sub-Condition (b) if the Issuer has *bona fide* contested the existence of the occurrence of an Event of Default under this sub-Condition (b) in the relevant court or in arbitration within forty-five (45) days of the date when the Issuer or its Material Subsidiary became aware of such alleged Event of Default as long as such dispute has not been finally and adversely adjudicated against the Issuer without any appeal period and any such contested amount shall not be taken into account in the calculation of the EUR 25,000,000 pursuant to this sub-Condition (b).

“**indebtedness for borrowed money**” means for purposes this Condition 12:

- (i) any indebtedness for moneys borrowed or raised by the Issuer or any of its Material Subsidiaries or for money owing in respect of any other form of financial accommodation whatsoever made available to the Issuer or any of its Material Subsidiaries (excluding normal trade indebtedness);
  - (ii) any indebtedness under any letter of credit, stand-by letter of credit or note purchase facility or acceptance credit opened on behalf of the Issuer or any of its Material Subsidiaries and any receivables purchase factoring or discounting arrangements;
  - (iii) any indebtedness under any bill discounting facility or bills of exchange on which the Issuer or any of its Material Subsidiaries is liable as drawer, acceptor, endorser or otherwise;
  - (iv) any indebtedness relating to principal and premiums (if any) and capitalised interest in respect of any debenture, bond, note, loan stock or similar instrument of the Issuer or any of its Material Subsidiaries; and
  - (v) any other transaction having the commercial effect of borrowing entered into by the Issuer or any of its Material Subsidiaries to finance its operations or capital requirements.
- (c) Negative Pledge: the Issuer does not comply with its obligations under Condition 9 (*Negative Pledge*); or
  - (d) Cessation of Business: The Issuer ceases to carry on its current business in its entirety; or
  - (e) Winding-up: An order is made or an effective resolution is passed for the winding-up (*Fi: selvitystila*), liquidation or dissolution of the Issuer or any of its Material Subsidiaries, except for (i) actions which are frivolous (*Fi: perusteeton*) or vexatious (*Fi: oikeuden väärinkäyttö*), or (ii) in the case of a Material Subsidiary, on a voluntary solvent basis; or
  - (f) Insolvency: (i) The Issuer or any of its Material Subsidiaries becomes insolvent or is unable to pay its debts as they fall due; (ii) or, by reason of actual or anticipated financial difficulties, commences negotiations with one or more of its creditors with a view to rescheduling any of its Indebtedness or (iii) an application is filed for it being subject to bankruptcy or re-organisation proceedings, or for the appointment of an administrator or liquidator of any of the Issuer’s or its Material Subsidiaries’ assets, save for any such applications that are contested in good faith and as long as such application has not been finally and adversely adjudicated against the Issuer or its Material Subsidiary without any appeal period.

For the purposes of these terms and conditions:

“**Group**” means the Issuer and its Subsidiaries from time to time (as defined in the Finnish Accounting Act (1336/1997, as amended, *Fi: kirjanpitolaki*)) and “**Group Company**” means the Issuer or any of the Subsidiaries.

“**Material Subsidiary**” means for the purposes of these terms and conditions, at any time, any Subsidiary of the Issuer:

- (g) whose total assets (consolidated in the case of a company which itself has Subsidiaries) represent not less than ten (10) percent of the consolidated total assets of the Group taken as a whole, all as calculated by reference to the then most recent financial statements (consolidated or, as the case may be, unconsolidated) of such subsidiary and the then most recent consolidated financial statements of the Group. If the Subsidiary has been acquired since the date at which the then most recent consolidated financial statements of the Group were prepared, the financial statements shall be adjusted in order to take into account the acquisition of that Subsidiary (such adjustment to be certified by the Group’s auditors as representing an accurate reflection of the total assets following the Subsidiary’s acquisition); or
- (h) to which is transferred the whole or substantially the whole of the sales or assets and undertakings of a subsidiary which, immediately prior to such transfer, was a Material Subsidiary.

“**Subsidiary**” means a subsidiary within the meaning of Chapter 1, Section 6 of the Finnish Accounting Act (1336/1997, as amended, *Fi: kirjanpitolaki*) (or under such provision as may replace this provision).

### 13. TAXATION

All payments in respect of the Notes by or on behalf of the Issuer shall be made without withholding or deduction for, or on account of, any present or future taxes, duties, assessments or governmental charges of whatever nature (“**Taxes**”) imposed or levied by or on behalf of Finland or any political subdivision or authority of Finland having power to tax, unless the withholding or deduction of the Taxes is required by law. In such case, the Issuer shall make such payment after such withholding or deduction has been made and shall account to the relevant authorities for the amount so required to be withheld or deducted. The Issuer will not be obligated to make any additional payments to the Noteholders in respect of such withholding or deduction.

### 14. NOTEHOLDERS’ MEETING AND PROCEDURE IN WRITING

- (a) The Issuer may convene a meeting of the Noteholders (a “**Noteholders’ Meeting**”) or request a procedure in writing among the Noteholders (a “**Procedure in Writing**”) to decide on amendments of these terms and conditions or other matters as specified below. Euroclear Finland and the Issuer Agent must be notified of the Noteholders’ Meeting or a Procedure in Writing in accordance with the regulations of Euroclear Finland.
- (b) Notice of a Noteholders’ Meeting and the initiation of a Procedure in Writing shall be published in accordance with Condition 15 (*Notices and Right to Information*) no later than ten (10) calendar days prior to the Noteholders’ Meeting or the last day for replies in the Procedure in Writing. The notice shall specify the time, place and agenda of the Noteholders’ Meeting or the last day and address for replies in the Procedure in Writing (or if the voting is to be made electronically, instructions for such voting) as well as any action required on the part of a Noteholder to attend the meeting or to participate in the Procedure in Writing. No matters other than those referred to in the notice may be resolved upon at the Noteholders’ Meeting or through the Procedure in Writing.
- (c) Only those who, according to the register kept by Euroclear Finland in respect of the Notes, were registered as holders of Notes on the fifth (5th) Business Day prior to the Noteholders’ Meeting or the last day for replies in the Procedure in Writing on the list of holders of Notes to be provided by Euroclear Finland in accordance with Condition 15 (*Notices and Right to Information*), or proxies authorised by such holders of Notes, shall, if holding any of the principal amount of the Notes at the time of the Noteholders’ Meeting or the last day for replies in the Procedure in Writing, be entitled to vote at the Noteholders’ Meeting or in the Procedure in Writing and shall be recorded in the list of the holders of Notes present in the Noteholders’ Meeting or participating in the Procedure in Writing.
- (d) A Noteholders’ Meeting shall be held in Helsinki, Finland and its chairman shall be appointed by the Issuer.

- (e) A Noteholders' Meeting or a Procedure in Writing shall constitute a quorum only if a Noteholder (or Noteholders) holding fifty (50) percent or more of the principal amount of the Notes outstanding attends the Noteholders' Meeting or provides replies in the Procedure in Writing.
- (f) If, within thirty (30) minutes after the time specified for the start of the Noteholders' Meeting, a quorum is not present, any consideration of the matters to be dealt with at the Noteholders' Meeting may, at the request of the Issuer, be adjourned for consideration at a meeting to be convened on a date no earlier than fourteen (14) calendar days and no later than twenty-eight (28) calendar days after the original Noteholders' Meeting at a place to be determined by the Issuer.

Correspondingly, if by the last day to reply the Procedure in Writing constitutes no quorum, the time for replies may be extended as determined by the Issuer.

The adjourned Noteholders' Meeting or the extended Procedure in Writing shall constitute a quorum if a Noteholder (or Noteholders) holding ten (10) percent or more of the principal amount of the Notes outstanding is present or provides replies in the Procedure in Writing.

- (g) Notice of an adjourned Noteholders' Meeting or in the Procedure in Writing, information regarding the extended time for replies shall be given in the same manner as notice of the original Noteholders' Meeting or the Procedure in Writing. The notice shall also state the requirements for the constitution of a quorum.
- (h) Voting rights of the Noteholders shall be determined according to the principal amount of the Notes held on the fifth (5th) Business Day prior to the Noteholders' Meeting or the last day for replies in the Procedure in Writing. The Issuer and any companies belonging to its group shall not hold voting rights at the Noteholders' Meeting or in the Procedure in Writing.
- (i) Subject to Condition 14 (l) below, resolutions shall be carried by a majority of fifty (50) percent of the votes cast. In the event of a tied vote, the chairman of the Noteholders' Meeting shall have the casting vote.
- (j) When consent from the Noteholders representing the requisite majority, pursuant to Condition 14 (i) or Condition 14 (l), as applicable, has been received in the Procedure in Writing, the relevant decision shall be deemed to be adopted even if the time period for replies in the Procedure in Writing has not yet expired.
- (k) A representative of the Issuer and a person authorised to act for the Issuer may attend and speak at a Noteholders' Meeting.
- (l) A Noteholders' Meeting or a Procedure in Writing is entitled to make the following decisions that are binding on all the Noteholders:

- (i) to change these terms and conditions of the Notes;
- (ii) to grant a temporary waiver on these terms and conditions of the Notes;

However, consent of at least seventy-five (75) percent of the aggregate principal amount of the outstanding Notes is required to:

- (iii) decrease the principal of or interest on the Notes;
- (iv) extend the maturity of the Notes;
- (v) amend the requirements for the constitution of a quorum at a Noteholders' Meeting or a Procedure in Writing; or
- (vi) amend the majority requirements of the Noteholders' Meeting or Procedure in Writing.

The consents can be given at a Noteholders' Meeting or in the Procedure in Writing or by other verifiable means.

The Noteholders' Meeting and the Procedure in Writing can authorise a named person to take necessary action to enforce the decisions of the Noteholders' Meeting or of the Procedure in Writing.

- (m) Resolutions passed at a Noteholders' Meeting or in the Procedure in Writing shall be binding on all Noteholders irrespective of whether they have been present at the Noteholders' Meeting or participated in the Procedure in Writing, and irrespective of how and if they have voted.

- (n) Resolutions passed at a Noteholders' Meeting or in the Procedure in Writing shall be notified to the Noteholders in accordance with Condition 15 (*Notices and Right to Information*). In addition, Noteholders are obliged to notify subsequent transferees of the Notes of the resolutions of the Noteholders' Meeting (or Procedure in Writing).

The Issuer shall have the right to amend the technical procedures relating to the Notes in respect of payments or other similar matters without the consent of the Noteholders, a Noteholders' Meeting or a Procedure in Writing.

## **15. NOTICES AND RIGHT TO INFORMATION**

Noteholders shall be advised of matters relating to the Notes by (i) a notice published in Helsingin Sanomat or any other major Finnish daily newspaper selected by the Issuer, (ii) a notice published on the official website of the Issuer, and/or (iii) with a stock exchange release. Alternatively, the Issuer may deliver notices on the Notes in writing directly to the Noteholders at the address appearing on the list of the Noteholders provided by Euroclear Finland in accordance with the below paragraph. Any such notice shall be deemed to have been received by the Noteholders when published or delivered in the manner specified in this Condition 15.

Notwithstanding any secrecy obligation, the Issuer shall, subject to the regulations of Euroclear Finland and applicable laws, be entitled to obtain information of the Noteholders from Euroclear Finland and Euroclear Finland shall be entitled to provide such information to the Issuer. Furthermore, the Issuer shall, subject to the regulations of Euroclear Finland and applicable laws, be entitled to acquire from Euroclear Finland a list of the Noteholders, provided that it is technically possible for Euroclear Finland to maintain such a list. The Issuer shall at the request of the Issuer Agent pass on such information to the Issuer Agent.

Address for notices to the Issuer is as follows:

Pohjolan Voima Oyj  
Töölönkatu 4  
P.O. Box 40  
FI-00101 Helsinki  
FINLAND

## **16. FORCE MAJEURE**

The Issuer, the Lead Managers, the Issuer Agent or the Paying Agent shall not be responsible for any damage caused by *force majeure* or any other unreasonable obstacle of their operations caused by any similar reason.

## **17. PRESCRIPTION**

In case any payment under the Notes has not been claimed by the respective Noteholder entitled to this payment within three (3) years from the original due date thereof, the right to such payment shall be prescribed.

## **18. LISTING**

The Issuer expects to list the Notes within 12 months from the Issue Date on Nasdaq Helsinki, subject to paragraph (b) of Condition 4 (*Interest*).

## **19. PURCHASES**

The Issuer may at any time purchase Notes in any manner and at any price. If purchases are made through a tender offer, the possibility to tender must be available to all Noteholders alike, subject only to restrictions arising from applicable securities laws. The repurchased Notes may be resold or nullified.

## **20. FURTHER ISSUES OF NOTES**

The Issuer may from time to time, without the consent of and notice to the Noteholders, create and issue further notes having the same terms and conditions as the Notes in all respects (or in all respects except for the first payment of interest on them, the issue price and/or the minimum subscription amount thereof) by increasing the maximum principal amount of the Notes or otherwise. For the avoidance of doubt, this Condition 20 shall not limit the Issuer's right to issue any other notes.

**21. INFORMATION**

Copies of the documents relating to the Notes shall be available for inspection during office hours at the office of the Issuer at Töölönkatu 4, 00100 Helsinki.

**22. APPLICABLE LAW AND JURISDICTION**

The Notes are governed by Finnish law.

Any disputes relating to the Notes shall be settled in the first instance at the District Court of Helsinki (*Fi: Helsingin käräjäoikeus*).

## ADDITIONAL INFORMATION ON THE ISSUE OF THE NOTES

Unless otherwise stated herein or the context otherwise requires, capitalised terms used below shall have the meaning ascribed to them in the Terms and Conditions.

Type of the Issue:	Private placement of Notes.
Principal amount:	The principal amount of the Notes is EUR 125 million.
Effective yield of the Notes on the Issue Date:	At the issue price of 99.357 percent, 1.886 percent per annum.
ISIN Code of the Notes:	FI4000327820
Form of the Notes:	Dematerialised securities issued in book-entry form in the Infinity book-entry system maintained by Euroclear Finland.
Depository and Settlement System:	Euroclear Finland, address Urho Kekkosen katu 5C, FI-00100, Helsinki, Finland, Infinity-system of Euroclear Finland.
Listing:	Application is expected to be made to have the Notes listed on Nasdaq Helsinki.
Estimated Time of Listing:	Within 12 months from the Issue Date.
Use of proceeds:	Proceeds from the issue of the Notes have been used for general corporate purposes, including investments and refinancing certain existing indebtedness.
Estimated expenses:	The Issuer's estimated expenses relating to the issue of the Notes are approximately EUR 0.6 million.
Interests of the Lead Managers:	Business interest customary in the financial markets. The Lead Managers were paid a fee by the Issuer in respect of the offering and issue of the Notes. Certain Lead Managers and/or their affiliates may be creditors under the facilities, which are planned to be refinanced and may be repaid in whole or in part from the net proceeds of the issue of the Notes.
Decisions and authorisations:	Decision and authorisation of the Board of Directors of the Issuer dated 25 May 2018.



## FINNISH TAXATION

*The following summary is based on the tax laws of Finland as in effect on the date of this Listing Prospectus, and is subject to changes in Finnish law, including changes that could have a retroactive effect. The following summary does not take into account or discuss the tax laws of any country other than Finland and does not purport to be a comprehensive description of all the tax considerations which may be relevant to a decision to subscribe for, purchase, own or dispose of the Notes and does not purport to deal with the tax consequences applicable to all categories of investors, some of which may be subject to special rules. Prospective purchasers of the Notes are advised to consult their own tax advisers concerning the overall tax consequences of their ownership of the Notes.*

### **Finnish Resident Noteholders**

#### ***Individual***

If the recipient of interest paid on the Notes is an individual (natural person) residing in Finland or an undistributed estate of a deceased Finnish resident, such interest is, when paid by the Issuer or securities dealer (*i.e.*, a Finnish financial institution making the payment), subject to an advance withholding tax in accordance with the Finnish Withholding Tax Act (1118/1996, as amended, *Fi: ennakkoperintälaki*) and final taxation as capital income in accordance with the Finnish Income Tax Act (1535/1992, as amended, *Fi: tuloverolaki*). The current withholding tax and capital income tax rate is 30 percent. Should the amount of capital income received by a resident natural person exceed EUR 30,000 in a calendar year, the capital income tax rate is 34 percent on the amount that exceeds the EUR 30,000 threshold. However, advance tax withholdings will still be made at the rate of 30 percent.

If Notes are disposed of during the loan period, any capital gain as well as accrued interest received (secondary market compensation) is taxed as capital income. The Issuer or a securities dealer (*i.e.*, a Finnish financial institution making the payment) must deduct an advance withholding tax from the secondary market compensation paid to an individual (natural person) residing in Finland or an undistributed estate of a deceased Finnish resident.

An individual (natural person) residing in Finland or an undistributed estate of a deceased Finnish resident may deduct eventual capital losses primarily from its taxable capital gains and secondarily from its other taxable capital income in the year of disposal and in the five subsequent calendar years.

If Notes are acquired in the secondary market, any accrued interest paid (secondary market compensation) is deductible from the capital income or, to the extent exceeding capital income, from earned income subject to the limitations of the Finnish Income Tax Act.

#### ***Corporate Entity or Partnership***

Interest paid to Finnish corporate entities (other than non-profit associations) and to Finnish partnerships is deemed to be taxable income of the recipient of interest. Any gain or loss realised following a disposal of the Notes will be taxable income or a tax deductible loss for the relevant Noteholder. The current tax rate for corporate entities is 20 percent. Interest paid to such Noteholders is not subject to any withholding tax.

### **Non-Finnish Resident Noteholders**

Noteholders who are not resident in Finland for tax purposes and who do not engage in trade or business through a permanent establishment or a fixed place of business in Finland will not be subject to Finnish taxes on interest or gains realised on the sale or redemption of the Notes. Interest payments made by the Issuer or a securities dealer (*i.e.*, a Finnish financial institution making the payment) to Noteholders who are not resident in Finland for tax purposes may, however, be subject to Finnish withholding tax, unless the identity of the Noteholders can be appropriately established.

## ADDITIONAL INFORMATION

### Governmental, Legal and Arbitration Proceedings

#### *The PVO Group*

Except as discussed below, neither the Issuer nor any other member of the PVO Group is or has been involved in any governmental, legal or arbitration proceedings (including any such proceedings which are pending or threatened of which the Issuer is aware) in the 12 months preceding the date of this Listing Prospectus which may have or have in such period had a significant effect on the financial position or profitability of the Issuer or the PVO Group.

PVO-Lämpövoima Oy, a wholly-owned subsidiary of the Issuer, entered into a co-operation agreement with Fortum Power and Heat Oy in December 1989 (the “**Co-operation Agreement**”). Pursuant to the Co-operation Agreement, the parties agreed, among others, that each of them has a perpetual right to use certain assets owned by the other party in connection with the operation of two power plants: Meri-Pori power plant owned by Fortum Power and Heat Oy and Tahkoluoto power plant owned by PVO-Lämpövoima Oy. PVO-Lämpövoima Oy’s Tahkoluoto power plant was decommissioned and taken out from commercial production in 2015, and the Issuer sold the related assets in January 2017. As a result, PVO-Lämpövoima Oy terminated the Co-operation Agreement in March 2017. Fortum Power and Heat Oy contested PVO-Lämpövoima Oy’s rights to terminate the Co-operation Agreement and initiated arbitration proceedings relating to the termination of the Co-operation Agreement. Simultaneously with such arbitration proceedings, Fortum Power and Heat Oy filed an application for summons in the district court of Helsinki against, *inter alia*, the Issuer.

On 8 June 2018, PVO-Lämpövoima, Fortum Power and Heat Oy and Issuer signed an agreement by which the parties agree upon the cancellation of all pending processes and legal proceedings, as well as the transfer of the assets jointly used by Tahkoluoto power plant and Meri-Pori power plant under the Co-operation Agreement to Fortum Power and Heat Oy.

#### *Joint Ventures*

Due to the delays in the construction of the OL3 EPR project, TVO was party to arbitration proceedings under the ICC with respect to costs and losses incurred in relation thereto. The Supplier had submitted claims to the ICC for an aggregate amount of approximately EUR 3.59 billion, which included a total amount of approximately EUR 1.58 billion in penalty interest (calculated up to 30 June 2017) and payments allegedly delayed by TVO under the Plant Contract, as well as approximately EUR 132 million of alleged loss of profit. TVO’s estimated quantum of costs and losses in respect of the period ending in late 2018 (which was the Supplier’s earlier estimate for the start of regular electricity production at OL3 EPR), which it had counter-claimed from the Supplier, was approximately EUR 2.6 billion, including TVO’s actual claim and an estimate of certain costs and interest.

In 2016 and 2017, the ICC tribunal made three final and binding partial awards on the initial key issue areas in the arbitration. The partial awards resolved the great majority of the facts and matters covered in these proceedings in favour of TVO, and rejected the great majority of the Supplier’s contentions in this regard. The partial awards do not take a position on the claimed monetary amounts.

In March 2018, Areva NP, Areva GmbH, Areva group parent company Areva SA, Siemens AG and TVO agreed finally and irrevocably to settle the claims pending or reserved in the arbitration and any other existing disputes among TVO and the Supplier in relation to the OL3 EPR project, whether or not raised in the arbitration, known and unknown claims between TVO and the Supplier arising out of or relating to events and circumstances regarding the OL3 EPR Project occurred prior to the signing date of the GSA, regardless of when the impact of such events and circumstances occurs, whether or not raised in the arbitration. In addition to settling all on-going legal actions related to the OL3 EPR project, the GSA is aimed at securing the provision of adequate and competent technical and human resources as well as funds for completion and start-up of the OL3 EPR until the end of the applicable guarantee periods. For more details on the GSA, see “*Risk Factors—Risks related to Nuclear Operations of TVO—There are several risks related to the Olkiluoto 3 EPR Project*” and “*Information about TVO—TVO’s Operations—Nuclear Operations—Olkiluoto 3EPR*”.

The arbitration settlement does not release the Supplier from any liability with regard to quality, performance and defects of the OL3 EPR, whether in design, configuration management, workmanship or any other cause whatsoever and regardless of when the event or circumstance giving rise to this liability occurs, or settle any future entitlement of the Supplier to unpaid portions of the contractual price, or settle any claims arising out of or relating to events and circumstances after the signing date of the GSA.

In accordance with the terms of the GSA, TVO also withdrew its appeals with the General Court of the EU against the European Commission’s decisions in January 2017 and in January 2018 related to the contemplated State Aid connected with the plan to restructure Areva’s business. The restructuring plan involved a transfer of the operations of Areva NP, excluding the OL3 EPR project and resources necessary for its completion, to New NP which was sold to a consortium led by EDF. In July 2017, Areva and EDF confirmed the signature of binding agreements with Mitsubishi Heavy Industries

and Assystem for the acquisition of an equity interest in New NP. Agreements pertaining to the OL3 EPR project and the resources necessary for its completion, as well certain agreements pertaining to components that are forged at the Creusot plant, remained within Areva NP. The transaction was completed on 31 December 2017, and thereafter the shares of New NP were sold respectively to EDF (75.5 percent), Mitsubishi Heavy Industries (19.5 percent) and Assystem (5 percent). New NP was renamed Framatome as of January 2018.

See also “*Risk Factors—Risks related to Nuclear Operations of TVO—There are several risks related to the Olkiluoto 3 EPR Project*” and “*Information about TVO—TVO’s Operations—Nuclear Operations—Olkiluoto 3EPR*”.

### **Recent Trends**

The Issuer operates on a cost-price principle as described in Article 4 of the Issuer’s Articles of Association. On long-term basis, the Issuer aims to provide stable and cost-efficient energy to its shareholders. Curbing climate change by reducing greenhouse gas emissions increases the production of weather-dependent renewable energy (e.g., wind and solar power), which also increases the importance of flexible energy systems and adaptive production in the future.

Other than as discussed above and elsewhere in this Listing Prospectus, the Issuer is not aware of any major recent trends that could reasonably be expected to have a material effect on PVO’s business or financial position. See “*Information about PVO—Market Information*”.

### **Material Adverse Changes in the Prospects of the Issuer**

There has been no material adverse change in the prospects of the Issuer since 31 December 2018, which is the last day of the financial period in respect of which the most recently audited financial statements of the Issuer have been prepared.

### **Significant Changes in the Issuer’s Financial or Trading Position**

There has been no significant change in the Issuer’s financial or trading position since 31 December 2018.

## DOCUMENTS INCORPORATED BY REFERENCE

The documents listed in paragraphs (i)–(ii) below have been incorporated by reference to this Listing Prospectus. The documents incorporated by reference are available at the Issuer’s website at [www.pohjolanvoima.fi/en/newsroom/financial-publications](http://www.pohjolanvoima.fi/en/newsroom/financial-publications), and at the office of the Issuer located at Töölönkatu 4, FI-00100 Helsinki, Finland on business days during normal business hours.

- (i) Audited consolidated financial statements of the Issuer, including auditor’s report, as of and for the financial year ended 31 December 2018.
- (ii) Audited consolidated financial statements of the Issuer, including auditor’s report, as of and for the financial year ended 31 December 2017.

## DOCUMENTS ON DISPLAY AND AVAILABLE INFORMATION

In addition to the documents incorporated by reference, the Issuer’s Articles of Association (together with English translations thereof) are available for viewing at the office of the Issuer, Töölönkatu 4, FI-00100 Helsinki, Finland for as long as any of the Notes are outstanding on weekdays from 9:00 a.m. to 4:00 p.m. In order to ensure the best possible service, persons wishing to examine the documents referred to in this section are kindly requested to notify the Issuer of their visit in advance by telephone (+358 10 478 5000).

The Issuer publishes annual and half-year reports, including its audited consolidated financial statements, at the Issuer’s website at [www.pohjolanvoima.fi/en/newsroom/annual-reports](http://www.pohjolanvoima.fi/en/newsroom/annual-reports). In addition, copies of these documents can be obtained from the Issuer, Töölönkatu 4, FI-00100 Helsinki, Finland , tel. +358 10 478 5000.

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