

## VINH SON - SONG HINH HYDROPOWER JSC (VSH)

<b>Current Price</b> VND15,550	<b>Target Price</b> VND16,000	<b>Dividend Yield</b> 6.30%	<b>Recommendation</b> HOLD	<b>Sector</b> UTILITIES
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## Outlook – Short term



## Outlook – Long term



## Valuation



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Originally an attractive investment with high plants utilization rate, favorable competitive electricity pricing and high profit margin, VSH's appeal has certainly dropped in recent years due to legal dispute with ex-contractors in the new hydropower plant's construction.

## Price performance



Source: VNDIRECT

## Key statistics

52w high (VND)	17,100
52w low (VND)	14,300
Average daily turnover (3m)	822.42
Market cap (VND) billion	3,207.05
Outstanding shares	207,241,246
Free float (%)	25
Beta	0.64

**Stable electricity output together with high utilization rate:** operating 4 turbines with total capacity of 130MW, VSH produces an average of 700 million kWh per annum. The company's utilization rate is 60%, nearly the highest among currently listing companies.

**Advantageous to sell electricity on competitive generation market (CGM):** large yearly-regulated reservoirs help boost VSH's ASP higher than competitors, especially in dry season. Currently, the company is selling 22% of output on CGM and the percentage will increase in the future.

**Upper Kon Tum project brings both risk and future return:** legal dispute with Chinese ex-contractors over contract ending can cost VSH a potential VND1,700bn. However, the project itself will triple VSH's revenue starting from 2019 when it goes into operation. The official hearing will take place in July 2017 and currently the company does not make any provision for the loss.

**2017 outlook:** For 2017, we forecast revenue to increase by 1.6% to VND455bn and earning before tax (EBT) to decrease by 3% to VND273bn due to lower financial income. Our forecast includes scenario of unchanged electricity output at slightly higher ASP at VND674.5/kWh (+1.4% yoy). Potential cash dividend of VND1,000/share is expected since VSH also has a history of regular dividend payment.

**Valuation:** We use FCFF method to value VSH considering the company's borrowing risk and ongoing litigation with Chinese ex-contractors. Our target price is set at VND16,000/share, translating to PE FY17 of 13.2x. We initiate VSH with a HOLD recommendation.

## Ownership Structure

<b>Major Shareholders</b>	<b>%</b>
EVN GENCO 3	30.6
REE Corp	21.0
Perfetto Ltd.	14.2
Halley Sicav	9.1

Financial summary (VND)	12-15A	12-16A	12-17E	12-18E
Revenue (bn)	467	448	455	464
Revenue growth	(15.7%)	(4.1%)	1.4%	2.0%
Gross margin	64.7%	59.5%	57.7%	58.4%
Operating EBITDA (bn)	360	325	320	328
Net profit (bn)	252	258	251	245
Net profit growth	(30.0%)	2.6%	(2.9%)	(2.0%)
EPS	1,220	1,251	1,215	1,190
BVPS	13,534	13,735	13,950	14,903
ROAE	8.7%	9.2%	8.8%	7.5%

Source: VNDIRECT

**COMPANY PROFILE**

Vinh Son – Song Hinh Hydropower Joint Stock Company (HOSE: VSH) is a hydropower production company in the central region of Vietnam. VSH became a joint stock company in 2005 and up until now has a chartered capital of VND2,062bn. VSH is the oldest hydropower plant in the central region, with Vinh Son plant operating from 1994 and Song Hinh plant from 1999.

The company’s ownership structure consists mostly of institutional shareholders: government-owned EVN Genco 3 (30.55%), REE Corp (21.01%), Perpetto Ltd. (14.18%) and Halley Sicav (9.11%).

VSH has one subsidiary company, VSH Technology Consulting and Services, and one associate company Binh Dinh Tourism JSC.

**BUSINESS ACTIVITY**

The company has two main power plants: Vinh Son plant with capacity of 66MW and Song Hinh plant with capacity of 70MW, both located in the central region of Vietnam.

The plants’ location is favorable to VSH’s electricity production activity. Central region of Vietnam is known to have the highest rain level in the country, providing ample water for the plants to operate. Rainy season occurs during September to December with an average annual precipitation of 2,000-2,400mm (vs 1,700-2,400mm in the north and 966-1,325 mm in the south).

Moreover, unlike other currently listed hydropower plants in the region (CHP, SBA, SEB), VSH’s two factories were built on relatively flat area with three large yearly-regulated reservoirs (132-323m<sup>3</sup>) that store enough water to produce electricity even during drought season.

**Stable electricity output and efficient production activity**

VSH produces an estimated five-year average of 700 million kWh per year. Despite power generation activity’s dependence on the reservoir water level, VSH’s yearly electricity output sale is stable throughout the years as seen.

The water level is highest during rainy season and thus output also peaks in Q4 and Q1. With yearly-regulated reservoirs, VSH also accumulates enough water for Q2’s production. This is very advantageous to VSH to sell electricity on CGM as price is often higher during dry season.

VSH’s total production capacity only takes up 15.5% of total hydropower capacity from listed companies at the present but it has one of the highest utilization rate (approx. 60% over the past 5 years and 33% higher than industry average).

VSH’s utilization rate even surpasses that of hydropower plants with higher capacity (CHP-170mW, TMP-150mW).

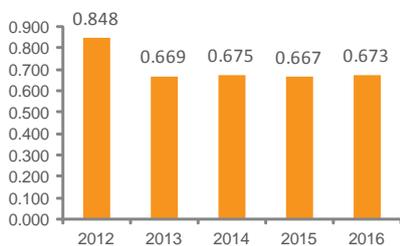
**Lowest cost of production among peer**

Hydropower production has lower cost of production compared to thermal power in average (VND329/kWh vs VND850/kWh respectively).

VSH has lowest cost of production among currently listing mid-range and large hydropower plants, giving it a competitive advantage to sell electricity on CGM.

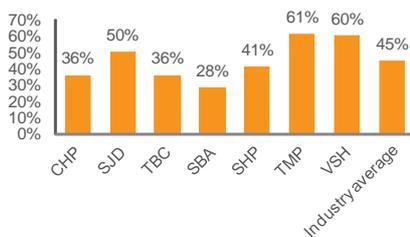
Depreciation takes up most of the production cost (53.8% industry average). Breaking down further the cost of electricity production, excluding the non-cash component (depreciation), VSH has one of

Electricity outputs for the past 5 years (bn kWh)



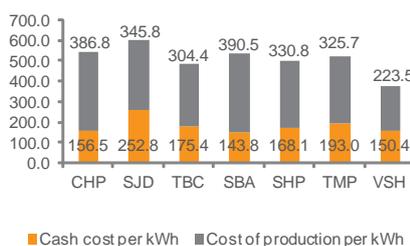
Source: VNDIRECT

Utilization rate of currently listing hydropower companies



Source: VNDIRECT

Cost of production and cash cost (VND/kWh)



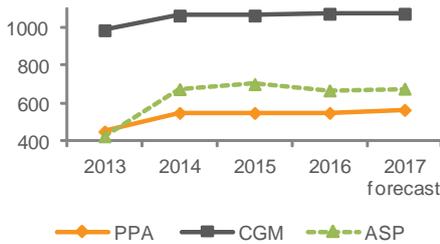
Source: VNDIRECT

the lowest cash cost consisting of labor, material, outside service and maintenance cost. While SBA has the lowest cash cost per kWh, the depreciation cost remains high as its plants came into production recently (2007 and 2011).

**Favorable ASP price in CGM to offset the low PPA price**

VSH recently renewed their power purchase agreement (PPA) with EVN in 2014. The new contract will extend till the end of the plants' useful lives (approx. 25 years).

PPA, CGM and ASP (VND/kWh)



Source: VNDIRECT

PPA price consists of two portions: fixed cost (FC) and facility operating and maintenance cost (FOMC). FC was determined at the beginning when the plants first came into operation, taking into account total construction costs and other installation costs. FC was calculated to ensure the IRR of the project does not exceed 12% (as regulated by EVN). FC will be recalculated when there are changes in forest environment service fee or/and natural resources consumption tax and will remain fixed throughout the duration of PPA.

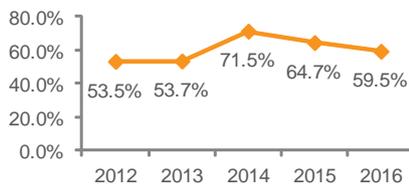
The second component, FOMC, takes into account maintenance and labor cost. FOMC will change every year, making up the variable portion of PPA price.

PPA price fluctuates around VND500/kWh in average for both plants and is only half the selling price in CGM. Around 22% of the electricity produced by VSH is currently sold on CGM.

**FINANCIAL ANALYSIS**

**High gross profit margin but low profitability due to new project**

Gross profit margin (%)



Source: VNDIRECT

With the long contract from EVN, VSH maintained high profit margin above 50% for the past 6 years. This can be explained through low cost of production and stable electricity sales.

However, VSH has very low return on assets (ROA) due to larger fixed asset values from the construction of new hydropower plant.

Return on equity (ROE) ratio is also depressing, dampening by very low asset turnover. Breaking down ROE further, NPLAT margin is fairly stable and remains above 60% for five-year average. This implies rather profitable company's operation if excluding the construction of new hydropower plant.

**Foreign exchange rate risk exposure**

Among the long-term debts, only borrowings from Andritz Hydro GmbH (Austria) worth US\$29.1mn and Nordic Development Fund (NDF) worth US\$6.12mn are in foreign currency. According to our estimation, with 1% increase/decrease in USD/VND exchange rate, the company will lose/gain VND17.5bn in revaluation of long-term debt this year.

Dividend yield in the industry



Source: VNDIRECT

**Stable dividend payment policy**

VSH regularly pays out cash dividend of VND1,000/share per annum (equivalent to 10% dividend on par value and 6.1% dividend yield at share price VND15,800). Compared with other currently listing hydropower companies, VSH's dividend yield is lower than industry average of 7.6%.

For 2017, the company has officially announced cash dividend of VND1,000/share with expected payment starting from June 30 and the ex-record date is Apr 24.

## UPPER KON TUM PLANT – RISK COMES WITH OPPORTUNITIES

VSH is currently building a new hydropower plant that brings future increase in the company's total capacity by 2.5 times. Upper Kon Tum plant is the largest hydropower plant in Kon Tum Province and is one of the last few big hydropower plants being built in the country.

The new plant will consist of 2 production engines with total capacity of 220mW, producing an average of 1.09 billion kWh each year (nearly twice VSH's current output). As planned, Upper Kon Tum will come on stream from the beginning of 2019. We estimate that the project will contribute VND1,372bn in revenue and VND969bn in profit per annum.

The total construction cost is estimated at VND7,407bn financing through 70% debt and 30% equity. The capital needed originally was VND1,663bn lower at VND5,744bn and was revised up in 2015 due to change in contractor.

The project started in 2011 and was first undertaken by Chinese contractors. After 3 years of delay without reason, VSH officially ended the contract with them and received VND42bn as contract guarantee amount. The new group of joint contractors (Construction JSC 47 (C47) - Song Da No 10 - Robbins (US)) took over in 2015 and since then has been making a rather fast progress of 500m/day.

### Much higher leverage incurred to finance the new project

At the present, the company is granted VND4,955 credit limit from various banks to finance the project. The latest borrowing was from VietinBank with credit limit of VND500bn and an extension of another VND900bn credit limit from Vietcombank.

Interest Coverage



Source: VNDIRECT

### Borrowing sources

Source	Credit limit (in bn VND)	Grace period	Maturity Year	Interest
Andritz Hydro GmbH (Austria)	655.484	3 months	2025	Libor 6-month +2.97%
BIDV	850.000	3 years	2027	10.5
VCB	1,600.000	3 years	2027	10.5
VietinBank	500.000	n/a	n/a	n/a
ACB + HDB	1,350.000	3 years	2027	10.5
Total	4,955.484			

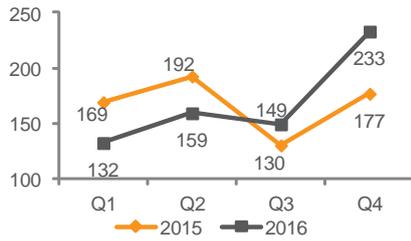
Source: VNDIRECT

Payment for dollar borrowing starts from beginning 2017 while borrowing in VND will start payment from mid-2018. We estimate that the company will be short of approximately VND384.2bn even after borrowing. Therefore, we incorporate another assumption of share issuance to existing shareholders within 2018 in our model. In our calculation, we forecast that the company will need to issue additional 38,423,972 new shares at par value (VND10,000/share) to make up for the capital shortage.

At the current capital structure, VSH's forecasted 2017 leverage ratio (debt/equity) jumped from 1.07 in 2016 to 1.33. We assess that the company's credit risk is still low evidenced by the interest coverage ratio. Moreover, with the new plant going online mid-2019, we expect VSH to generate higher revenue more than enough to cover the interest and principal payment in the future years when the grace period is over.

Since the project is not yet over, increase in project construction value will be capitalized under construction-in-progress in fixed assets. This will be transferred to plant, property and equipment (PPE) and depreciated normally when the project comes into operation at beginning of 2019.

Electricity output (million kWh)



Source: VSH

**BUSINESS PERFORMANCE**

**2016 operating results**

EI Nino caused a reduction in electricity output during 9M2016 and business result only took a positive turn from September onward with La Nina’s arrival.

VSH’s electricity output during 2016 reached 673 million kWh, an 0.8% increase from 2015. Despite unfavorable weather condition, the company maintained stable electricity production. The highest was during Q4 with 233.07 million kWh (+56.35% yoy), which more than offset the decline in previous quarters.

Percentage of electricity sold on CGM decreased compared to 2015 (30% in 2015 vs 22% in 2016), leading to lower ASP at VND665.36/kWh (-5% yoy). The reason was due to low water level during EI Nino in 9M2016 while VSH still needed to prioritize selling to EVN. Lower ASP also led to lower gross profit margin (GPM) compared to 2015 at 59.5% (-8.04% yoy).

For 2016, VSH’s sale contracted by 4.1% yoy due to large decrease in electricity production in 1Q and 2Q. However, the company’s NPAT improved by 2.6% due to higher financial income (+82.8% yoy) from short-term financial investments.

**2017 outlook**

**60-70% probability of EI Nino coming back**

According to Australian Bureau of Meteorology, weak EI Nino-Southern Oscillation (ENSO) will start around July 2017 and the probability of EI Nino re-appearing will increase towards the end of the year.

Weak EI Nino is not as worrying as full-blown EI Nino. It only reduces rain level during rainy season and does not cause serious draught over the region. We assess this would not affect VSH’s operation significantly during 2017.

**Earnings forecast**

Historically, VSH maintained fairly stable electricity output even with EI Nino appearance as higher output from unaffected quarters will offset lower output from affected quarters. We forecast the electricity volume in 2017 to be the same as 2016 at 673 million kWh.

We also forecast the whole year ASP will be at VND674.5/kWh with our assumptions of 22% electricity sold on CGM and unchanged CGM price. We maintain the same percentage of electricity sold on CGM since rainy reason will be dryer when EI Nino returns in September.

The current higher forest environment service fee from VND20/kWh to VND36/kWh starting from Jan 01, 2017 has not been reflected in the current PPA price.

For 2017, we forecast revenue to increase by 1.6% yoy to VND455bn and EBT to decrease by 3% to VND273bn due to lower financial income.

Financial income in our forecast will be at VND39bn(-26.4% yoy) due to lower amount of cash and cash equivalents while financial expenses slightly decrease to around VND18.8bn (-5% yoy).

We forecast long-term debt increasing by more than VND1,005bn during the year to finance the Upper Kon Tum plant. Pressure to borrow more will be high during 2017-2018 in order to finish the plant construction according to schedule.

## VALUATION

### Upper Kon Tum project profitability

According to the company, the new plant will sell electricity at much higher price either VND990/kWh (downside case) or VND1,430/kWh (upside case) to compensate for higher construction cost. From our calculation (based on EVN regulation of project IRR not exceeding 12%), we came up with the selling price for Thuong Kon Tum at VND1,230/kWh. This is our base case to forecast the profitability of the whole project.

#### Scenario assumptions

	Company target 1	Company target 2	Our scenario
Selling Price (VND/kWh)	990	1,430	1,230
NPV	747	2,466	922.3
IRR	13.61%	20.57%	11.96%
Payback period (years)	14.08	6.08	10.66
Discount rate	10%	10%	10.14%

Source: VSH, VNDIRECT

The discount rate used in our calculation was based on weighted average cost of capitals (WACC) employed by the project at 10.5% before-tax cost of debt and 14.2% cost of equity.

The project life will be 40 years with no salvage value at the end of useful life. The new hydropower plant will operate at 60% capacity, similar to average utilization rate of current plants.

### VSH's valuation

Due to unstable debt structure and high leverage, we evaluate VSH using FCFF method. Taking into account higher debt and legal dispute with Chinese ex-contractors, we set the WACC at 13%.

FCFF for the first two years will be negative since the cash flows from the current plants will not be enough to finance the construction of Upper Kon Tum. From 2019 onward, the new plant will go online and cash flow from the new project will bring the FCFF back to positive again.

#### FCFF Valuation

	Assumption	Unit
WACC	13%	
Firm Value	6,504.2	bn VND
Net Debt	3,190.9	bn VND
Market Value of Equity	3,313.3	bn VND
No. of shares outstanding	206,241,246	shares
Target Price	16,065	VND

Source: VNDIRECT

#### FCFF values (bn VND)

Year	2017 (F)	2018 (F)	2019 (F)	2020 (F)	2021 (F)	2022 (F)	2023 (F)	2024 (F)	2025 (F)	2026 (F)
FCFF	(909.7)	(717.2)	642.3	726.9	925.0	1,067.7	1,103.8	1,114.3	1,123.9	1,130.6
Terminal CF value										11,931.5

Source: VNDIRECT

We evaluate the fair value of VSH at VND16,000/share, translating to PE FY17 of 13.2x. We initiate VSH with a HOLD recommendation as we believe improvement in the company's market price will only appear when there is optimistic news from the lawsuit.

## RISKS

### Potential higher expenses incurred due to ongoing litigation

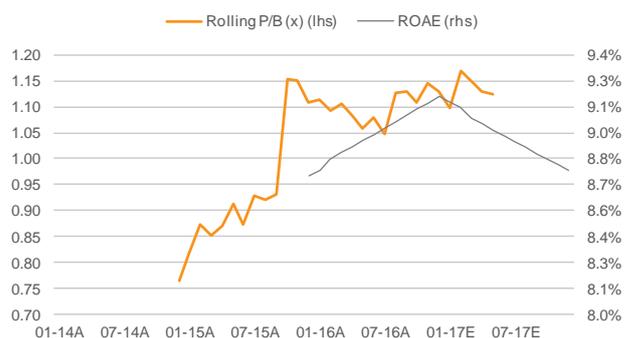
After the contract with Chinese contracted ended in 2011, the Chinese side sued VSH to the Vietnam International Arbitration Center (VIAC), holding VSH of contract infringement charge. End of 2014, VSH filed a counterclaim to VIAC asking for compensation from the Chinese ex-contractors due to construction delay. Both sides will go through official hearing this July and there is no information yet about the extent of financial damage from the lawsuit.

The total amount VSH was sued for is VND1,700bn. According to our latest information, the Chinese ex-contractors side had come forward twice with reconciliation proposals. However, no mutual agreement was reached and both sides continue with the lawsuit.

VSH's management has expressed determination in winning the lawsuit and willingness to follow through until a fair verdict is reached. VSH's side has not disclosed the exact amount of accumulated legal fee for this dispute.

Refrigeration Engineering Corporation (REE VN), one of VSH's major shareholders, has taken up initiative to assist VSH in the proceedings of the lawsuit.

Valuation



Income statements

(VNDbn)	12-16A	12-17E	12-18E
Revenue	448.2	454.6	463.6
Cost of sales	(181.4)	(192.2)	(192.7)
Gen & admin expenses	(21.8)	(22.1)	(22.5)
Selling expenses	0.0	0.0	0.0
<b>Operating profit</b>	<b>245.0</b>	<b>240.3</b>	<b>248.3</b>
Operating EBITDA	324.8	320.2	328.5
<b>Depreciation and amortisation</b>	<b>(79.9)</b>	<b>(79.8)</b>	<b>(80.1)</b>
<b>Operating EBIT</b>	<b>245.0</b>	<b>240.3</b>	<b>248.3</b>
Interest income	53.3	48.5	35.1
Financial expense	(20.0)	(18.8)	(19.0)
Net other income	1.0	1.0	1.0
Income from associates & JVs	1.6	1.6	1.6
<b>Pre-tax profit</b>	<b>280.8</b>	<b>272.6</b>	<b>267.0</b>
Taxation	(22.8)	(22.1)	(21.6)
Minority interests	0.0	0.0	0.0
<b>Net profit</b>	<b>258.1</b>	<b>250.5</b>	<b>245.4</b>
Adj. net profit to ordinary	258.1	250.5	245.4
Ordinary dividends	(206.2)	(206.2)	(244.7)
<b>Retained earnings</b>	<b>51.9</b>	<b>44.3</b>	<b>0.7</b>

Cash flow statement

(VNDbn)	12-16A	12-17E	12-18E
<b>Pretax profit</b>	<b>281</b>	<b>273</b>	<b>267</b>
Depreciation & amortisation	80	80	80
Other non cash gains/(losses)	(14)	17	18
Other non operating gains/(losses)	(53)	(73)	(225)
Tax paid	(20)	(22)	(22)
Other operating cash flow	308	0	0
<b>Change in working capital</b>	<b>(326)</b>	<b>300</b>	<b>397</b>
<b>Cash flow from operations</b>	<b>256</b>	<b>575</b>	<b>516</b>
Capex	(1,304)	(1,565)	(1,630)
Proceeds from assets sales	0	0	0
Others	(582)	251	238
Other non-current assets changes	0	5	(0)
<b>Cash flow from investing activities</b>	<b>(1,886)</b>	<b>(1,309)</b>	<b>(1,392)</b>
New share issuance	0	0	384
Shares buyback	0	0	0
Net borrowings	1,478	1,005	1,093
Other financing cash flow	(475)	(137)	(581)
Dividends paid	(206)	(206)	(245)
<b>Cash flow from financing activities</b>	<b>797</b>	<b>662</b>	<b>652</b>
Cash and equivalents at beginning of period	1,153	320	249
<b>Total cash generated</b>	<b>(833)</b>	<b>(72)</b>	<b>(225)</b>
Cash and equivalents at the end of period	320	249	24

Balance sheets

(VNDbn)	12-16A	12-17E	12-18E
Cash and equivalents	320	249	24
Short term investments	664	464	264
Accounts receivables	754	556	358
Inventories	374	199	25
Other current assets	44	37	38
<b>Total current assets</b>	<b>2,156</b>	<b>1,504</b>	<b>708</b>
Fixed assets	3,929	5,793	7,888
Total investments	13	13	13
Other long-term assets	12	7	7
<b>Total assets</b>	<b>6,110</b>	<b>7,318</b>	<b>8,617</b>
Short-term debt	246	169	69
Accounts payable	200	116	142
Other current liabilities	42	422	414
<b>Total current liabilities</b>	<b>488</b>	<b>706</b>	<b>624</b>
Total long-term debt	2,789	3,735	4,347
Other liabilities	0	0	0
<b>Shareholders' equity</b>	<b>2,833</b>	<b>2,877</b>	<b>3,646</b>
Minority interests	0	0	0
<b>Total liabilities &amp; equity</b>	<b>6,110</b>	<b>7,318</b>	<b>8,617</b>

Key ratios

	12-16A	12-17E	12-18E
<b>Dupont</b>			
Net profit margin	57.6%	55.1%	52.9%
Asset turnover	0	0	0
ROAA	4.6%	3.7%	3.1%
Avg assets/avg equity	2	2	2
ROAE	9.2%	8.8%	7.5%
<b>Efficiency</b>			
Days account receivable	107	107	107
Days inventory	755	378	47
Days creditor	404	220	268
Fixed asset turnover	0	0	0
ROIC	4.4%	3.7%	3.0%
<b>Liquidity</b>			
Current ratio	4	2	1
Quick ratio	4	2	1
Cash ratio	2	1	0
Cash cycle	459	265	(114)
<b>Growth rate (yoy)</b>			
Revenue growth	(4.1%)	1.4%	2.0%
Operating profit growth	(12.9%)	(1.9%)	3.3%
Net profit growth	2.6%	(2.9%)	(2.0%)
EPS growth	2.6%	(2.9%)	(2.0%)
<b>Share value</b>			
EPS (VND)	1,251	1,215	1,190
BVPS (VND)	13,735	13,950	14,903
DPS (VND)	1,000	1,000	1,000

Source: VNDIRECT

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