



USAID Financing Growth TO #18 Ukraine Energy Privatizations

Task Two: Preliminary Privatization Support



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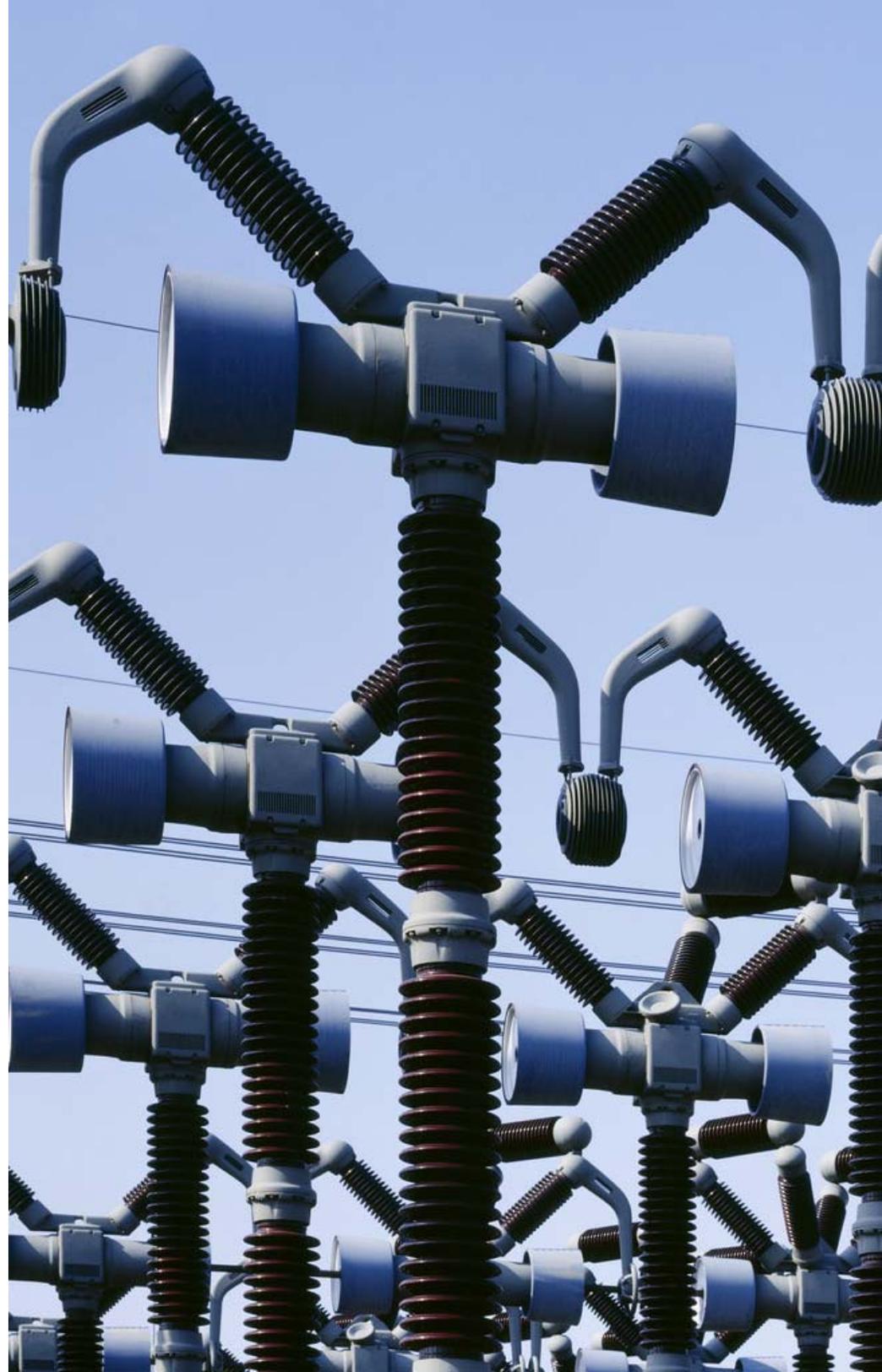


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Overview:

Preliminary Due Diligence

In Section 1, we present the results of our preliminary due diligence, for each oblenargo, organized into the following sections:

01

Business
Overview



We review each OE's business, including customer mix, organizational structure, licenses and permits held, ownership and (book) capital structure.

02

Operational
Characteristics



Summarizes processes for purchasing power through to sales and supply, analyzes cash collection history, bad debts, commercial and technical losses.

03

Statement
Analysis



We analyze OE financial statements, including key drivers of results, liquidity and capital adequacy and reported information that merits further due diligence.

04

Capital
Expenditures



We analyze actual vs. planned capital expenditures and review investment requirements for each OE as reported by Ministry of Energy.

05

Contract
Summary



We summarize the key contracts held by each OE, including contracts with Energorynok for supply of power and typical contracts with customers.

Overview: Preliminary Diligence

Khmelnitskoblenergo



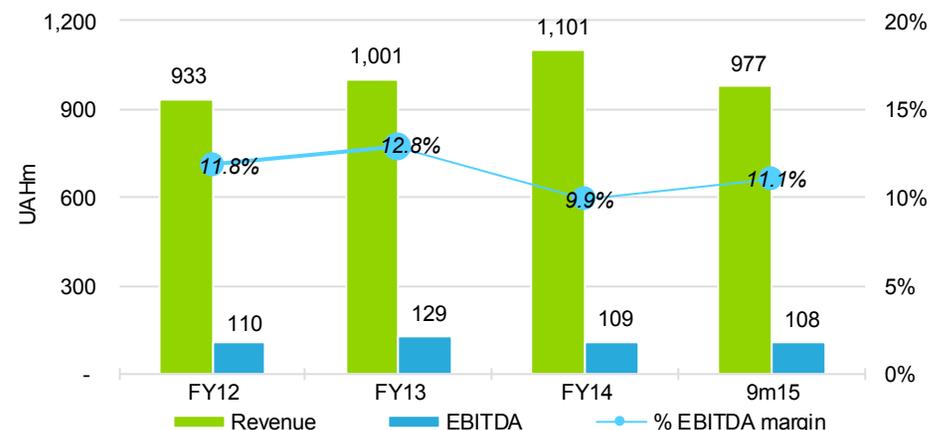
Analytics

- **Service Area:** 20.6k sq. km
- **Customers:** 547K res., 20K commercial/industrial
- **Customer Base:** 37% residential, 39% small business, 24% industry/commercial/municipal
- **Employees:** 3,559
- **Electricity Assets:** 67% fully depreciated by 2015
- **Investment:** Under plan by UAH 73M for 2012-15; 5-6X annual Capex increase for 2016-2020
- **Technical & Commercial Losses:** 14.3%
- **Minority Shares:** VS Energy 20%, others approx. 8%

Risks

- **Small size:** 2nd smallest of SOE group, limits profit and growth potential
- **Limited industrial base:** Oblast's major industrial plants have closed, limiting growth potential

Financial Summary



Source: Management information, Deloitte analysis

Investment Highlights

- **Strong Management and Customer Service:** Modern call center and customer service focus
- **Good Financial Results:** High profit margins and cash collection rates, little debt, normal receivables
- **Potential Combination with TernopilOE:** Investor could improve performance and profits through combination
- **Clean SOE:** Fewest concerns over third party contracts, investigations, questionable business practices

Overview: Preliminary Diligence

Ternopiloblenergo



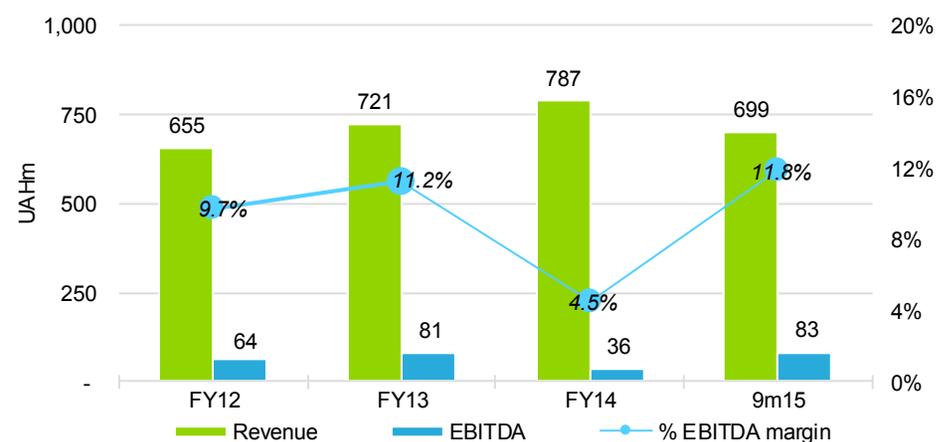
Analytics

- **Service Area:** 13.8 k sq. km
- **Customers:** 400K residential and 16.5K commercial/industrial
- **Customer Base:** 54% res.; 46% industry/commercial
- **Employees:** 2,200
- **Electricity Assets:** 61% depreciated by 2015
- **Investments:** met plan for 2012-2015; 2-2.5X annual Capex increase for 2016-2020
- **Technical & Commercial Losses:** 17%
- **Minority Shares:** Offshore holdings for Grigorishin (15%) and Kolomoysky (25%)

Risks

- **Small size:** Smallest of SOE group, limits profit and growth potential
- **Limited industrial base:** two large industrial plants in the oblast were closed, mostly residential customer base
- **Aged asset base:** facilities and assets give tired, outdated impression

Financial Summary



Source: Management information, Deloitte analysis

Investment Highlights

- **Good financial position:** Decent profit margins, reasonable debt, good collection history, little customer concentration
- **Potential Combination with KhmelnytskOIE:** Opportunity to improve already high performance and profits through consolidation
- **Clean SOE:** Fewer concerns over third party contracts, investigations, questionable business practices

Overview: Preliminary Diligence

Kharkivoblenergo



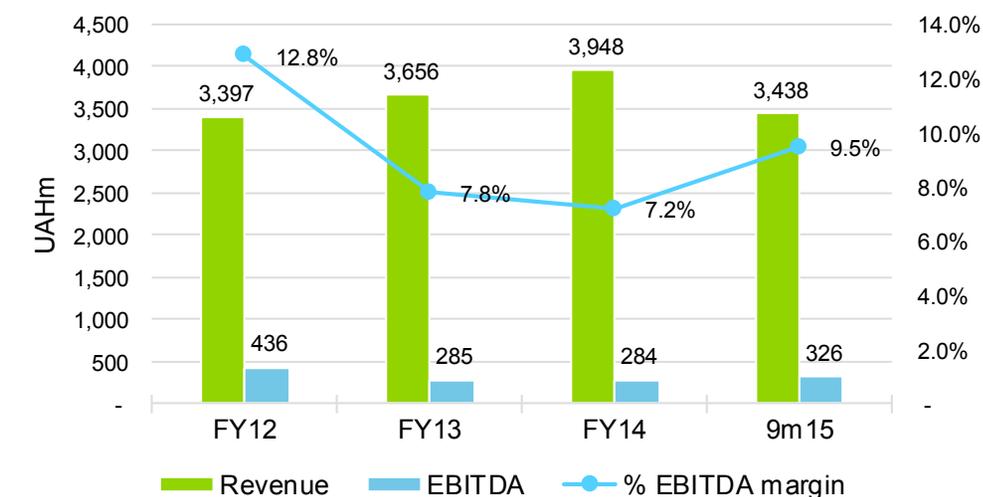
Analytics

- **Service Area:** 32k sq. km
- **Customers:** 1.2m res. and 33k commercial/industrial
- **Customer Base:** 36% residential; 64% commercial/industrial
- **Employees:** 6,731
- **Electricity Assets:** 30.9% depreciated by 2015
- **Investments:** under plan by UAH 313m for 2012-2015; 10X annual Capex increase for 2016-2020
- **Technical & Commercial Losses:** 12%
- **Minority Shares:** Grigorishin (30%), Kharkiv mayor also has an influence

Risks

- **Collections:** challenging industrial receivables
- **Payments from water municipality:** largest customer (9%) not paying bills, can't be shut off
- **Questionable transactions:** security issuances, changes in Other Assets, need further review
- **Underinvestment:** large gaps between actual and planned/needed capex in recent years

Financial Summary



Source: Management information, Deloitte analysis

Investment Highlights

- **Large Customer Base:** MWh volume and revenue stayed stable through conflict, one of the five largest OE's
- **Good Financial Condition Given Challenging Environment:** Good profit margins, no debt, low payables, decent residential collection rates
- **Industrial Base Stabilization:** Power usage and payments should improve over 2014-2015

Overview: Preliminary Diligence

Mykolaivoblenergo



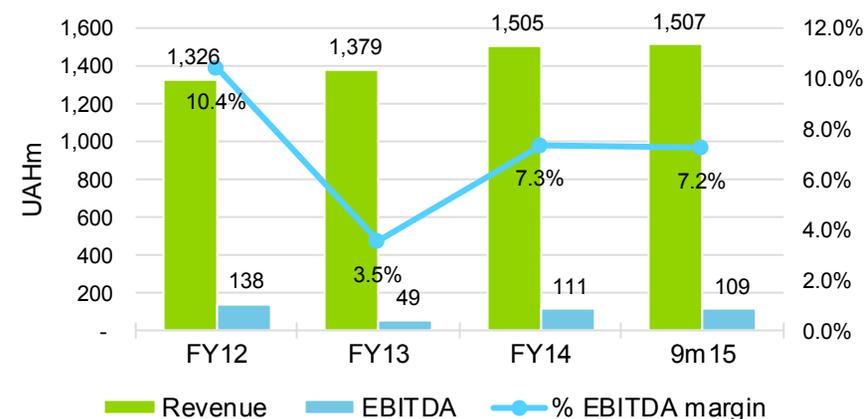
Analytics

- **Service Area:** 24.6k sq. km
- **Customers:** 467k res.; 16k commercial/industrial
- **Customer Base:** 39.5% residential; 60.5% commercial/industrial
- **Employees:** 3,555
- **Electricity Assets:** 53.2% depreciated by 2015
- **Investment:** under plan by UAH 30m 2012-15; capex needs through 2016-2020 projected at UAH 1,305m
- **Technical & Commercial Losses:** 11.7%
- **Minority Shareholders:** Includes VS Energy (11.9% through Khersonoblenergo).

Risks

- **Debt to Energorynok:** Company has UAH 327m debt incurred from 1999-2006. A repayment plan runs till 2023 to pay outstanding debt.
- **Disputed Asset Ownership:** Operates 3 small hydro plants, cannot find title for assets for transfer
- **Non-Payment:** 48% of accounts receivable are 1+ years past due
- **Liabilities:** UAH 76m in fines needs review

Financial Summary



Source: Management information, Deloitte analysis

Investment Highlights

- **Good Operations Management:** Improving internal KPIs focused on CAPEX, loss reduction, and debt service
- **High residential collections rate:** 99% in 2015

Overview: Preliminary Diligence

Zaporozhyaoblenergo



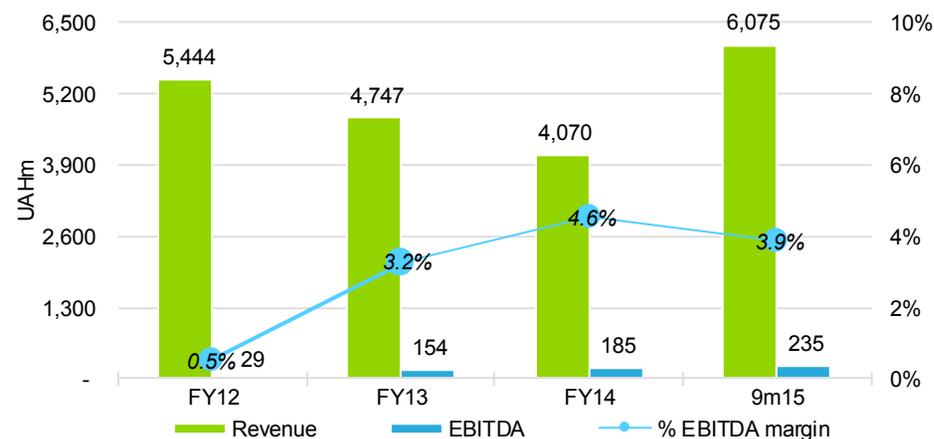
Analytics

- **Service Area:** 27.2k sq. km
- **Customers:** 760k res.; 23k commercial and industrial;
- **Customer Base:** 20.8% res.; 64.7% industrial /commercial; 6.2 % municipal and govt.; 8.3 % transit
- **Employees:** 5,761
- **Electricity Assets:** 73% depreciated by 2015
- **Investments:** under plan by UAH 313m 2012-14
- **Technical & Commercial Losses:** 7.3%
- **Minority Shares:** Grigorishin (6%), Surkis (17%), Kolomoysky (6%)

Risks

- **High sales concentration:** 3 industrial customers account for 58% of sales in 9m2015, representing UAH 3,528m revenue
- **Accounts payable to Energorynok:** Overdue debt of UAH 1,032m restructured, payable through 2022.
- **Accounts receivables:** Investigation of assignment of UAH 496m receivables by Anticorruption Board
- **Investment needs:** Lowest achievement of NEURC approved rate: 11% in 2015 vs. 90%+ in 2007.

Financial Summary



Source: Management information, Deloitte analysis

Investment Highlights

- **Large customer base:** Potential for strong cash flow and profits if industrial customers pay their bills
- **Technical competency:** Low technical losses. Ranked 5th best of OEs for performance by NEURC

Preliminary Due Diligence



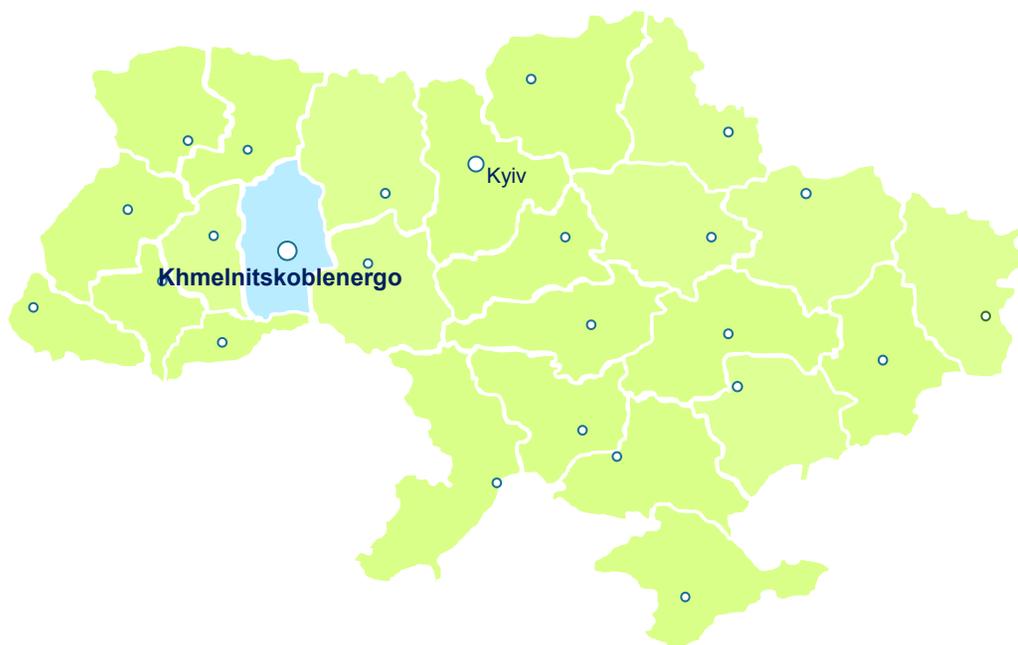
1.1 Preliminary Due Diligence

Khmelnitskoblenergo

1.1.1 Business Overview

Khmelnitkoblenergo

Location, Facts & Figures on Market Served



Overview

- The economy of Khmelnitkyi oblast has well developed agricultural, energy (nuclear power plant), machinery and food industries (particularly sugar). The oblast is situated at a historical crossroad of railway and highway routes connecting Central Europe to the Black Sea coast and Russia (with the city of Shepetivka being an important railway junction)
- The Company covers 20.6 sq. km territory of Khmelnitkyi region, and serves 547,721 residential and 20,074 commercial customers
- Approximately 3,600 employees

Licenses, authorizations and other permits

- License for supply of electricity at regulated tariffs from April 2011 through April 2021
- License for transmission of electricity by local electric grid from April 2011 through April 2021
- License for construction of certain buildings and equipment originated April 2012 for a five year term ending April 2017
- License on fire systems engineering, installation and maintenance works from 13 October 2014

Key dates

1960

Regional office "Silenerho" was reorganized into Khmelnitkyi power administration of agriculture.

1978

Khmelnitkyi power administration was reorganized into North and South electric power enterprises.

1995

Khmelnitkoblenergo was established based on North and South electric power enterprises, formerly the PEA Vinnytsyaenergo and Kamyanyets-Podilsky HPS.

1998-2000

SPFU sold a total of 30 percent of Khmelnitkoblenergo via stock exchanges and auctions.

2003

The main customer service center was opened in Khmelnitkyi. Subsequently the network of customer service centers was developed within all districts of the region.

2005

Quality management system was introduced in accordance with the requirements of ISO 9001-2000 standard.

2008-2012

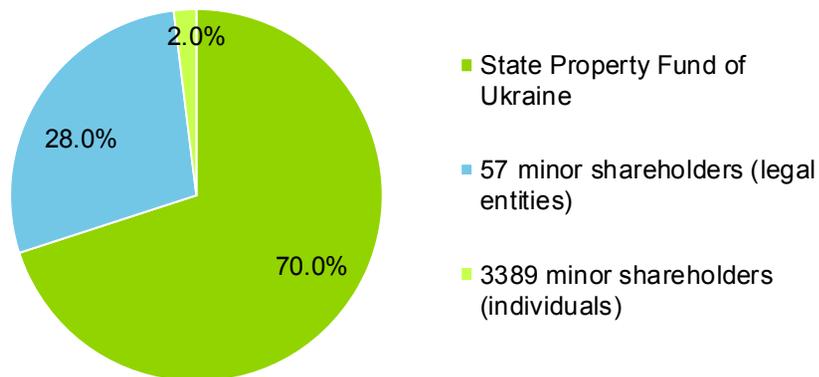
Participation in Kyoto protocol within power distribution system modernization.

1.1.1 Business Overview

Khmelnytskoblenergo

Ownership structure and description of minority shareholders

Ownership structure



Source: Management information

Capital structure (book value) as at 30 September 2015, UAHm



Source: Management information

Minority shareholders

- VS Energy International N.V. is among minor shareholders. VS Energy International, an Amsterdam based company connected to Russian businessmen Yevgeny Giner, Alexander Babakov and Mikhail Voevodin, currently holds a 90 percent interest in Khersonoblenergo. These persons and their business are under US and EU sanction lists.
- VS Energy currently holds interests ranging from 13 to 91 percent ownership in ten oblenergos in Ukraine.

Capital structure (book value)

- Shareholders' equity is UAH 757m as of September 2015. Net cash amounted to UAH 17m as of the date.
- Investment activities of Khmelnytskoblenergo are mainly financed with cash flow generated from operating activities. Management utilizes short-term bank loans only to cover monthly liquidity gaps.

1.1.1 Business Overview

Khmelnitskoblenergo

Overview of key assets

Fixed assets as at 30 September 2015

UAHm	Cost	Net book value	Worn-out ratio, %
Power lines	1,013	417	58.8%
Equipment for substations	71,791	107	99.9%
Buildings and constructions	174	90	48.3%
Telecommunication lines	287	29	90.0%
Office equipment	643	13	98.0%
Vehicles	745	12	98.4%
Other assets	2,514	76	97.0%
Total	77,166	744	99.0%

Source: Management information

Key assets overview

- 56 percent, or UAH 417m of fixed assets as of 30 September 2015 is represented by power transmission lines, which are depreciated by 59%. 33,014 km of power lines are overhead and 1,465 km – cable.
- Power stations and equipment are almost fully depreciated with UAH 107m NBV as of 30 September 2015.
- Worn out ratio of buildings equaled to 48 percent as of 30 September 2015.

Power lines by capacity as of 31 December 2014

km	Overhead power lines	Cable power lines
110 kV	1,549	-
35 kV	1,768	-
10 kV	12,776	864
0.4 kV	16,922	601
Total	33,014	1,465

Source: Management information

Power stations number by voltage

	Number	MVA
110 kV	70	1,363
35 kV	104	397
0,4-6/10 kV	7,316	1,529
PDS ¹ 10 kV	64	35
Total	7,554	3,324

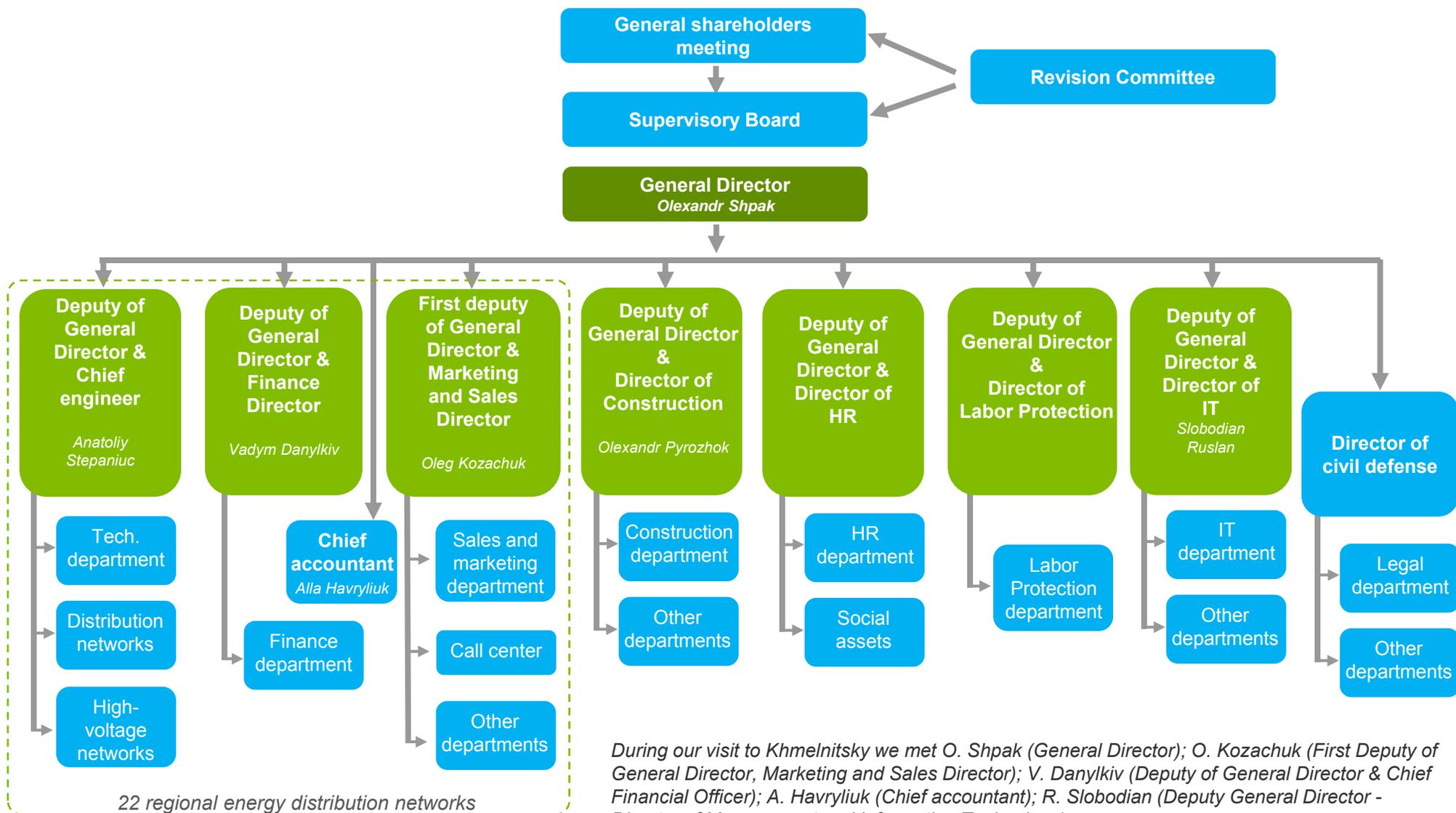
Notes: (1) Power distribution stations

Source: Management information

1.1.1 Business Overview

Khmelnytskoblenergo

Organization Chart



During our visit to Khmelnytsky we met O. Shpak (General Director); O. Kozachuk (First Deputy of General Director, Marketing and Sales Director); V. Danylkiv (Deputy of General Director & Chief Financial Officer); A. Havryliuk (Chief accountant); R. Slobodian (Deputy General Director - Director of Management and Information Technology)

1.1.1 Business Overview

Khmelnitskoblenergo

Customer service, billing, collection capabilities



- Khmelnitskoblenergo nominates energy demand on monthly basis.
- Payments are arranged 6-7 times per month.
- The company repaid UAH 24m restructured debt due to Energorynok during 2013-2015 in full.

- The Company serves about 550k residential and 20k commercial customers.
- Customer base:
 - 36.6 percent residential;
 - 39.4 percent small business;
 - 14.3 percent industrial, commercial and agricultural;
 - 9.7 percent municipal and govt.;
- Please see summary of the typical contracts with customers in Section 1.1.5.

- Supply of electricity to customers under regulated tariff via 22 regional energy distribution networks, depending on the voltage class.
- The Company supplied 1.8b kWh of electricity to consumers and transported 0.4b kWh through the grid in 2014.

- Legal entities are metered remotely (100 percent of consumers connected via multi-tariff electricity meters). Commercial accounting systems are integrated with the billing system.
- Majority of residential customers are metered monthly in place and then billed.
- 2.3 percent of residential consumers connected via multi-tariff electricity meters and 3.2 percent are connected to the intellectual automated system of electricity metering.

- Commercial and industrial customers pay three times per month:
 - 30 percent on the 2nd day of the current month
 - 30 percent on the 10th day of the current month
 - 40 percent on the 20th day of the current month
- Households pay for consumed electricity on the 10th day of the next month.
- The company takes measures to collect overdue payments on a regular basis, including court proceedings and disconnections.

1.1.2 Operational Characteristics

Khmelnytskoblenergo

Aggregate commercial and technical losses, bad debts

Electricity movements in the Khmelnytskoblenergo grid

m kWh	FY12	FY13	FY14	9m15
Purchased electricity	2,102	2,129	2,098	1,470
Transportation of electricity	364	391	387	280
Flow of electricity to the grid	2,490	2,543	2,506	1,763
Technical losses, actual	410	404	376	252
Actual losses, %	16.5%	15.9%	15.0%	14.3%
Normative losses, %	17.9%	17.3%	17.1%	17.0%
Production needs	13	12	10	4
Electricity supply from the grid, total	2,067	2,127	2,121	1,507
Net electricity supply	1,715	1,749	1,749	1,239

Source: Management information

Aging of accounts receivable

UAH m	31 Dec 12	31 Dec 13	31 Dec 14	30 Sep 15
Trade receivable, including:				
current	25	29	35	55
<12 months	10	7	3	3
12 to 18 months	2	2	1	4
from 18 to 36 months	2	3	2	2
over 36 months	3	3	4	3
Bad debt provision	(11)	(10)	(8)	(7)
Total	31	34	36	60
Provision for doubtful debts to total accounts receivable, %	23.1%	19.1%	14.9%	8.8%

Source: Management information

Commercial and technical losses

- Percentage of actual losses includes technical losses during the period as the share in total flow of electricity to the grid. Per management, there were not any commercial losses in the past four years. Normative losses are provided by NEURC.
- The level of actual technical losses decreased from 16.5 percent in 2012 to 14.3 percent for 9 month 2015, which is 2.7 p.p. less than normative level of losses for the period.
- Net electricity supply remained stable from 2012 to 2014, totaling 2.1b kWh per year.

Bad debts

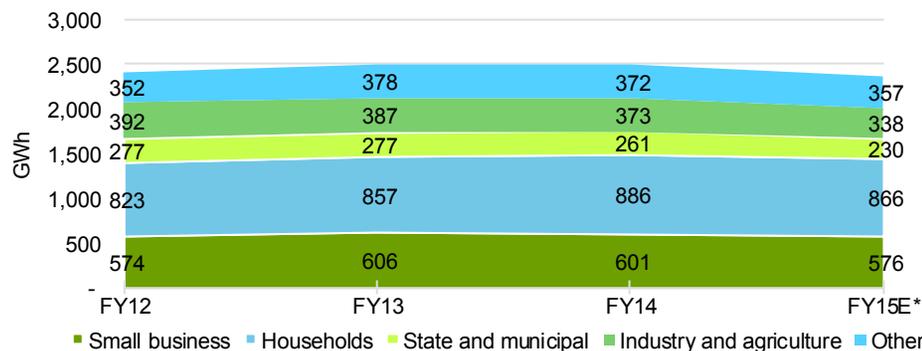
- According to the Cabinet of Ministers Resolution # 1673 state enterprises are obliged to accrue 100 percent allowance for accounts receivable aged more than 1.5-year.
- As of September 2015, UAH 9m accounts receivable were overdue by over one year, while allowance for doubtful debts amounted to UAH 7m.

1.1.2 Operational Characteristics

Khmelnytskoblenergo

Electricity customers served

Sales volume



Note: *Annualized data for 9m15
Source: Management information

Top 5 customers in 9m15

#	Company	GWh	UAHm	% of revenue
1	Khmelnytskiy nuclear power plant	10	16	1.7%
2	Motor Sich (Volochnsk Machine-Building Plant)	8	15	1.6%
3	State Enterprise Novator	9	15	1.5%
4	Development company TK Bug	5	8	0.9%
5	Municipal utility company Hmelnytskvodokanal	9	8	0.8%
	Others	1,734	896	93.5%
	Total	1,775	959	100.0%

Source: Management information, Deloitte analysis

Customer base and key trends

- Small businesses and households represent the largest groups of customers, which consumed 39.4 percent and 36.6 percent of electricity supplied by Khmelnytskoblenergo during 9 month 2015, respectively. The share of industrial, commercial and agricultural entities consumption equaled to 14.3 percent and state and municipal consumers – 9.7 percent.
- Consumption of electricity by households demonstrated stable growth during 2012-2014 with 3.5 percent CAGR.
- Over the past years electricity consumption by small business, industrial and other commercial customers, state and municipal customers remained stable.

Overview of key customers

- The Company's revenue is slightly concentrated. The top five clients of the Company include two state-owned enterprise and one municipal enterprise.
- Volochnsk Machine-Building Plant is a subsidiary Motor Sich, the major producer of aircraft engines.
- Novator is a state-owned radio technical plant, which is engaged in manufacturing of gas and water counters, aircraft transponders.

1.1.3 Financial Statement Analysis

Khmelnitskoblenergo

Income Statement Analysis

Statement of financial performance

UAH m	FY12	FY13	FY14	9m15	Δ ¹ , %
Revenue	933	1,001	1,101	977	18.3%
Cost of goods sold	(796)	(844)	(961)	(844)	17.1%
Gross profit	137	157	140	133	27.1%
Operating expenses					
Administrative	(26)	(28)	(30)	(25)	8.1%
Distribution expenses	(1)	(0)	(0)	(0)	44.5%
EBITDA	110	129	109	108	32.3%
Normalized EBITDA	99	108	108	106	31.1%
Depreciation	(49)	(48)	(81)	(53)	(12.8%)
Financial income	0	2	2	8	455.8%
Financial expense	(6)	(6)	(3)	(0)	(97.3%)
Other income	15	13	14	10	(5.7%)
Other expenses	(34)	(30)	(11)	(11)	39.0%
Income tax	(6)	(10)	(4)	(12)	262.7%
Profit after tax	31	49	26	50	156.1%
% Gross profit margin	14.7%	15.7%	12.7%	13.6%	
% EBITDA margin	11.8%	12.8%	9.9%	11.1%	
% Normalized EBITDA margin	10.6%	10.8%	9.8%	10.9%	

Note: [1] annualized for 9m15

Source: Management information, Deloitte analysis

EBITDA normalizations

UAH m	FY12	FY13	FY14	9m15
EBITDA	110	129	109	108
N 1. Recognition of other income/expenses as operating	(25)	(22)	(3)	(4)
N 2. One-off benefits for retirees and employees	12	-	-	-
N 3. Expenses on holding kindergarten	1	2	1	2
Normalized EBITDA	99	108	108	106

Source: Management information, Deloitte analysis

Income statement overview

- Over the last 3 years **revenue** increased mainly due to price increases, namely an increase in tariff rates for industrial and commercial customers (from UAH 0.8 per kWh in 2012 to UAH 1.0 per kWh in 2014), and an increase in consumption from households (by 63m kWh during 2012-2014).
- During 9m15, average tariff increased by an additional 29 percent for industrial and commercial entities and 26 percent for households.
- 70.0 percent of **cost of goods sold** during 9m15 totaling UAH 591m is represented by cost of purchased electricity, mostly from Energorynok. Salary of production personnel equaled to 21.3 percent of cost of sales or UAH 180m during 9m15. Growth in salary costs from UAH 183m in 2012 to UAH 220m in 2014 was mainly explained by an increase in average monthly salary from UAH 3.2k in 2012 to UAH 3.9k in 2014.
- Salary of administrative personnel constitutes about 78.2 percent of **administrative expenses** or UAH 19m during 9m15.
- Financial expenses** mainly relate to amortization of long-term restructured liabilities due to Energorynok.

1.1.3 Financial Statement Analysis

Khmelnitskoblenergo

Balance Sheet Analysis

Statement of financial position

UAHm	31 Dec 12	31 Dec 13	31 Dec 14	30 Sep 15	Δ, %
Property, plant & equipment, net	478	795	768	744	(3.1)%
Intangible and other assets	4	5	4	4	2.4%
Advances issued for fixed assets	4	14	15	71	389.0%
Non-current assets, net	486	814	787	820	4.2%
Inventory	21	25	20	32	58.7%
Accounts receivable, net	31	34	36	60	64.5%
Advances issued	1	7	-	-	n/a
Advances received	(32)	(46)	(57)	(66)	16.1%
Accounts payable	(24)	(26)	(8)	(26)	215.7%
Payroll payable and related taxes	(11)	(26)	(17)	(12)	(25.9)%
VAT and other payables for taxes, net	(9)	(13)	(5)	(12)	166.7%
Other current liabilities, net	(14)	(16)	(17)	(18)	4.7%
Net working capital	(35)	(61)	(47)	(43)	(9.0)%
Total	451	753	740	777	5.0%
Financed by:					
Bank loans	10	-	-	-	n/a
Cash and cash equivalents	(4)	(19)	(31)	(27)	(13.1)%
Interest-bearing net debt/(cash)	5	(19)	(31)	(27)	(13.1)%
Non-operating liabilities					
Restructured debt due to Energorynok	24	9	1	1	0.0%
Dividends payable	2	1	1	9	n/a
Net debt/(cash)	32	(8)	(30)	(17)	(41.8)%
Deferred tax liability	2	53	46	38	(16.8)%
Shareholders' equity	418	709	724	757	4.5%
Total	451	754	740	777	5.0%
Accounts receivable turnover, days	12	12	12	17	
Accounts payable turnover, days	11	11	3	8	
Current Ratio	0.6	0.5	0.6	0.7	
Quick Ratio	0.4	0.3	0.4	0.4	
Operating Cash Flow Ratio	0.8	0.9	0.8	0.6	

Source: Management information, Deloitte analysis

Balance Sheet overview

- **Fixed assets:** 56 percent or UAH 417m of fixed assets are represented by power transmission lines, UAH 107m (or 14 percent) – power station equipment, and UAH 220m – buildings and other. Fixed assets were independently valued in 2013 for IFRS financial statements purposes.
- Major **non-core assets** are represented by Health complex “Apple Orchard” and kindergarten, which generated UAH 3m and UAH 1m loss in 2014 respectively. Management would like to transfer the kindergarten to municipal authorities and expects to make the sanatorium a profit making.
- **Advances issued for fixed assets** are mainly represented by advances to Akroplast LLC for new office building construction.
- **Accounts receivables** increased from UAH 36m as of December 2014 to UAH 60m as of September 2015, mainly due to increased receivables due from households (by UAH 11m) and for subsidies (by UAH 8m). Price increase also contributed to the increase in accounts receivable.
- **Advances received** are represented by prepayments for electricity from customers.
- **Bank loans:** credit line with a limit of UAH 18m and maturity date of 27 August 2013 was provided by Erste Bank and outstanding amount of approx. UAH 9.5m as of 31 December 2012 was repaid in 2013.
- **Restructured liabilities due to Energorynok** totaling UAH 24m as of December 2012 was repaid in full during subsequent periods.

1.1.3 Financial Statement Analysis

Khmelnitskoblenergo

Cash Flow Statement Analysis

Cash Flow Statement

UAH m	FY12	FY13	FY14	9m15
Operating activities				
Sales ¹	1,110	1,191	1,301	1,135
Other proceeds	18	27	37	35
Less cash paid for:				
Goods	(770)	(789)	(884)	(808)
Payroll expenses	(202)	(216)	(256)	(204)
Other expenditures	(32)	(23)	(24)	(19)
Tax and fees liabilities	(56)	(72)	(88)	(60)
Net cash flow from operating activities	68	117	87	79
Cash flows from investing activities				
Purchases of property, plant and equipment	(67)	(85)	(64)	(82)
Net cash used in investing activities	(67)	(85)	(64)	(82)
Cash flows from financing activities				
Bank loans	272	178	27	81
Repayment of loans	(263)	(187)	(27)	(81)
Other proceeds	0.0	2	-	8
Dividends	(7)	(10)	(10)	(9)
Net cash provided by financing activities	2	(18)	(10)	(1)
Net cash flow for the reporting period	3	15	13	(4)
Balance at beginning of year	1	4	19	31
Balance at the end of the year	4	19	31	27
Sales excluding VAT	925	992	1,085	946
Cash conversion ratio	99%	99%	99%	97%

Note: (1) - including VAT

Source: Management information, Deloitte analysis

Cash flow overview

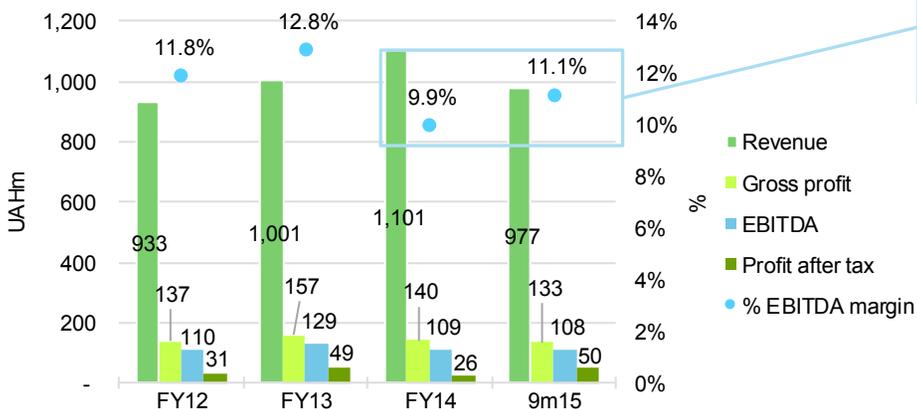
- **Operating activities:** Due to good payment discipline of customers, the Company managed to reach nearly 100 percent cash collection ratio during 2012-9m15.
- **Investment activities:** The Company uses cash flow received from operating activities to finance its capex. Please see Section 1.1.4 for more details on capex.
- **Bank loans:** the Company uses short-term funds from banks for financing liquidity gaps (for payment for purchased electricity and payroll expenses). Bank loans were mainly provided by credit line from Erste Bank, FidoBank, Ukreximbank, and Ukrsotsbank.
- **Dividends:** Per management historically the Company paid 30 percent of net profit for dividends. According to the resolution of the Cabinet of Ministers of Ukraine №33 from 29 January 2014, joint-stock electric power companies with the state stake of more than 50 percent are obliged to pay dividends of 30 percent of the net profit if the Company has not made a decision on dividends until May 1 of the year following the reporting. In 2014, the Company did not make a decision on dividends. In 2015, the Company paid UAH 9m to the government as dividends on its post performance in 2014.

1.1.3 Financial Statement Analysis

Khmelnytskoblenergo

Operating profitability analysis

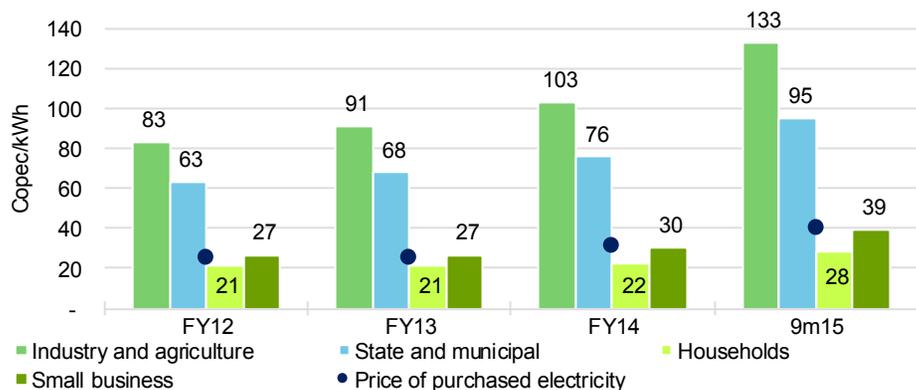
Revenue and profitability dynamics



Source: Management information

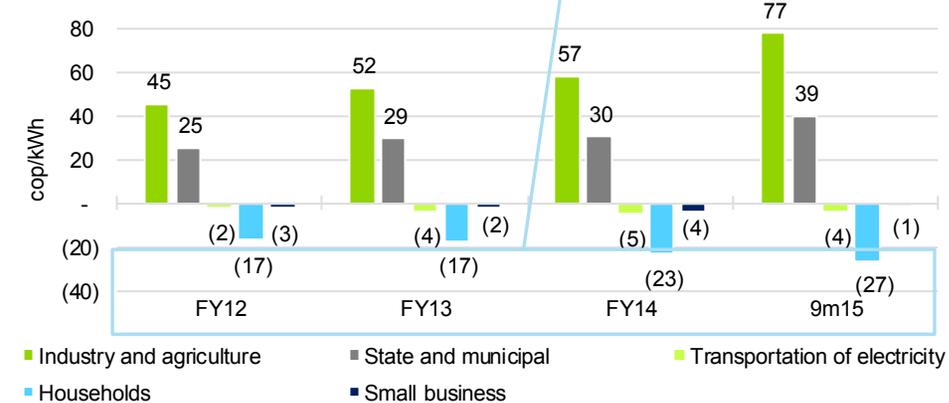
Decrease of profitability in 2014 was largely explained by increase of loss-making households in total share of consumption and decrease in share of industrial and commercial entities

Revenue per kWh by customers groups



Source: Management information

Gross profit



Source: Management information

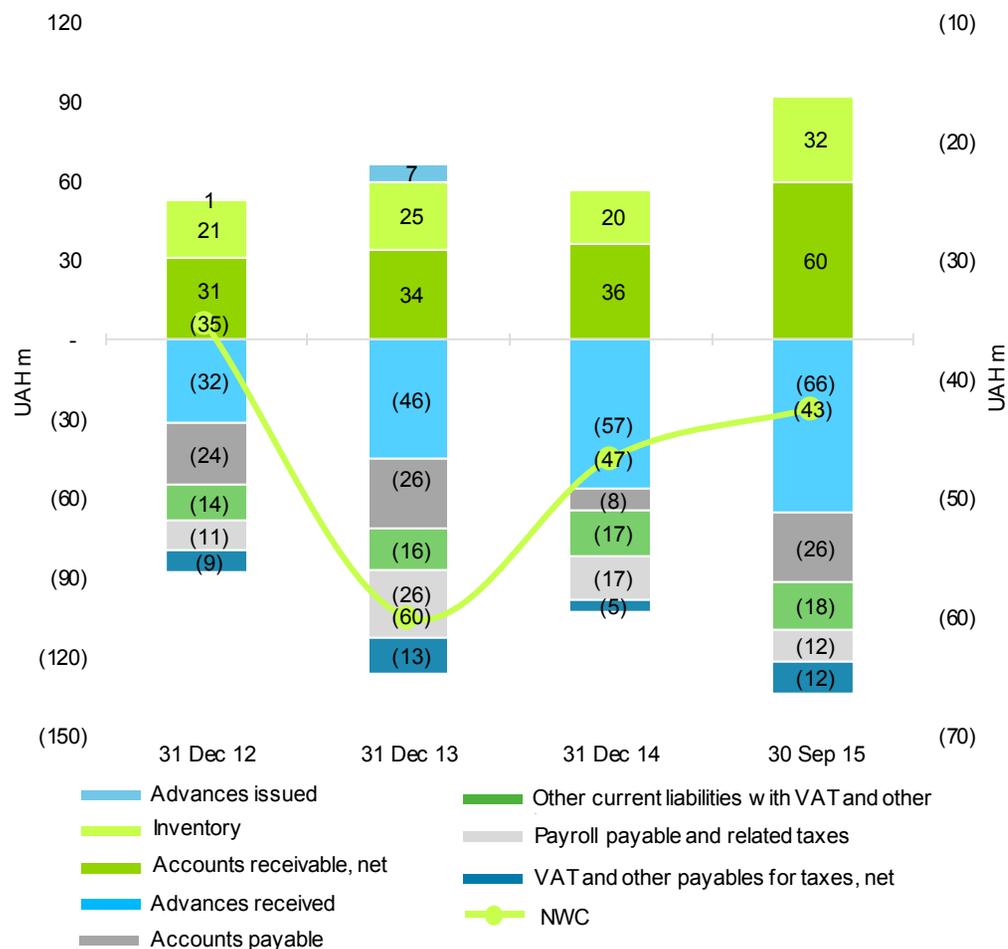
Residential tariffs have historically been highly subsidized and lower than cost

1.1.3 Financial Statement Analysis

Khmelnitskoblenergo

Liquidity analysis

Net working capital dynamics



Source: Management information, Deloitte analysis

Liquidity analysis

- Decrease in Net working capital from UAH (35)m as of end of 2012 to UAH (60)m as of 31 December 2013 was mainly due to an increase in payroll payable and related taxes by UAH 15m and advances received from customers by UAH 14m. Payroll payable increased due to recognition of annual bonus for personnel for 2013 totaling UAH 12m.
- UAH 13m increase in Net working capital during 2014 is mainly explained by UAH 18m repayment of accounts payables for raw materials and services and recognition of lower annual bonus (by UAH 8m compared to 2013).

Normalized net working capital

UAHm	31 Dec 12	31 Dec 13	31 Dec 14	30 Sep 15
NWC before normalizations	(35)	(60)	(47)	(43)
Normalizations				
[1] Annual bonuses payable to employees	-	8	-	(3)
NWC normalized	(35)	(52)	(47)	(45)
Normalized NWC to revenue, %	(3.8%)	(5.2%)	(4.2%)	(4.6%)

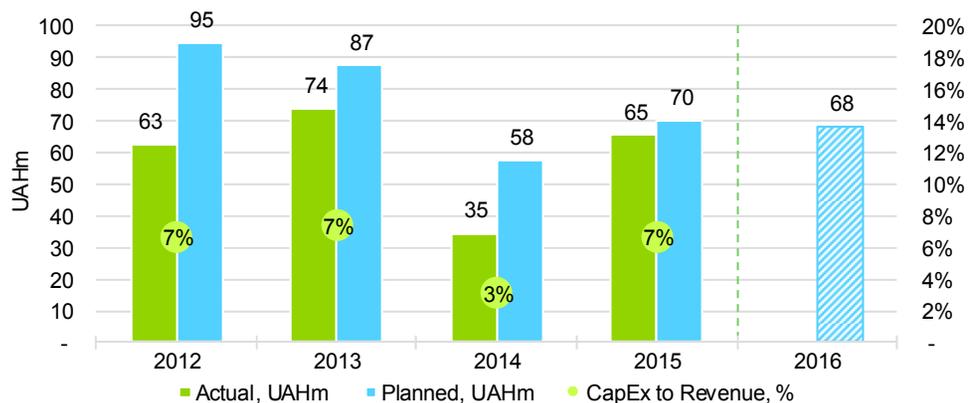
Source: Management information, Deloitte analysis

1.1.4 Future Capital Expenditures

Khmelnytskoblenergo

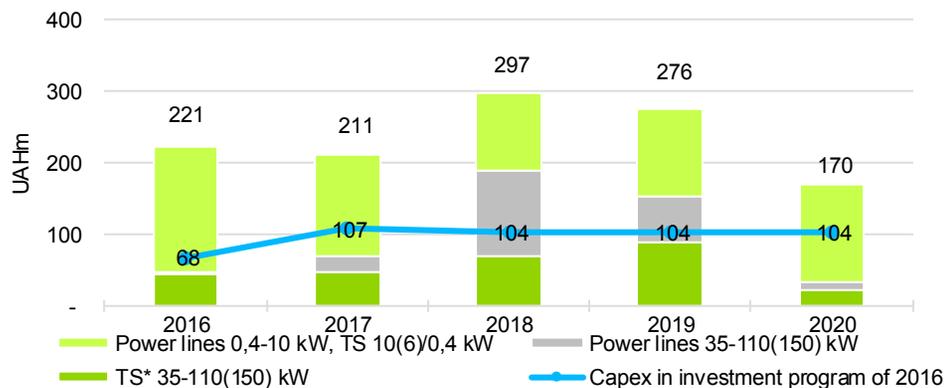
Investment Requirements and Timing of Planned Investments

Capex according to investment program for 2012 - 2016



Source: Management information

Capex needs in prices of 2015



Note: *Transformer substation

Source: Ministry of Energy and Coal Industry of Ukraine

Historical Capital Expenditure

For 9m15 actual capex amounted UAH 41.2m, which comprised 59 percent of the plan the year.

- UAH 35.8m (58 percent of the whole year target level) were spent on technical development (upgrades), modernization and construction of electrical networks and equipment.
 - Construction of distribution power station 110/10 kV "Pribuzka": UAH 28.2m (57 percent of the target level). The power station was successfully put into operations at the end of January 2016.
- UAH 1.5m (44 percent of the annual target level) were spent on measures to reduce losses (improvement of electricity metering and replacement of measuring transformers).
- UAH 0.2m (72 percent of the annual target level) were spent on development of information technology including purchase and upgrade of software.
- UAH 0.8m (98 percent of the annual target level) were spent on development of communication systems.
- UAH 2.8m (73 percent of the annual target level) were spent on planning for prospective development of electric networks.

Capital Expenditure Needs

- Ministry of Energy and Coal Industry of Ukraine has developed a plan of development of power distribution networks for 2016-2020 for each disco in the context of implementation of the Law of Ukraine "On principles of functioning electricity market of Ukraine".
- According to this program, total investment needs of the Company are estimated at UAH 1,175m for 2016-2020.

1.1.5 Contract Summary

Khmelnitskoblenergo

Major suppliers and other third party contracts

	Period	Terms of delivery	Payment	Fines	Other
Contract with Energorynok	Till the end of the year, automatically prolonged for each subsequent year if both sides of the contract have not expressed their willingness to terminate a within 30 days of expiration.	Energorynok provides dispatching services and services on transit of electricity by long-distance and interstate electric grid; Actual volume of received electricity at the Oblenergo delivery points is determined based on hourly data of system of commercial accounting.	1) 5% of ordered amount till 2 nd day of the month; 2) 10% - till 5 th day of the month; 3) 15% - till 10 th day of the month; 4) 24% - till 14 th day of the month; 5) 11% - till 21 th day of the month; 6) 15% - till 26 th day of the month; 7) 20% - in the last working day of the month.	After non-payment in 1 days after the end of "period" - 0.05% from the remaining amount to be paid in 3 days.	Message about ordered monthly volume of electricity purchase has to be provided the next day after adoption of the resolution by NEURC; Energorynok has the right to limit electricity supply if Oblenergo does not pay in full or by dates.
Typical contract with Legal entity	For a calendar year, automatically prolonged for each subsequent year if both sides of the contract have not expressed their willingness to terminate or change the contract within 30 days of expiration.	Volumes are determined for the year during the October of previous year by a Consumer.	1) till 2 nd day - 30% of ordered volume in current month; 2) till 10 th day - 30% of ordered volume in current month; 3) till 20 th day - 40% of ordered volume in current month.	Double NBU discount rate for every day of overdue + 3% annual + inflation index; In case of excess over agreed volume of consumption and capacity, double tariff for difference. (if consumer has connected capacity 150kW and more, and consumption volume more than 50,000kWh).	Oblenergo has the right to limit or stop electricity supply (warning 3 days before) if Consumer does not make payment by dates.
Typical contract with Individuals	The contract is signed for the period of 3 years, and is prolonged automatically for 1 year if both sides of the contract have not expressed their willingness to make any changes to the contract; The contract could be terminated in the case if the consumer change the place of living and stop consuming electricity.	The company is obliged to provide planned audit, maintenance, and repair of meters free of charge; The company is obliged to conduct the checking indications on meters equipment.	Payment are made according to current tariffs and volume of consumed electricity during the period stated in the invoice (or till 10th day of next month); In the case of changing tariffs, the company is obliged to inform the customer no more than 5 days before new tariff implementation; In the case of providing electricity at different technical standards mentioned in the contract, customer can pay 25% of payment; In the case of cessation of electricity supply because of Company's fault, the Company has to reimburse double costs of not supplied electricity.	In the case of payment delay, customer is obliged to pay penalties agreed in the contract.	Technical standards of electricity stated in the contract.

Source: Management information, Deloitte analysis

1.2 Preliminary Due Diligence

Ternopiloblenergo

1.2.1 Business Overview

Ternopiloblenergo

Location, Facts & Figures on Market Served



Overview

- Population of Ternopil region is 1.1m, where 56 percent of residents live in non-urban areas. The region is mainly agricultural.
- The Company covers a 13.8k sq. km territory, where serves 401,741 residential and 16,493 commercial customers.
- Approximately 2,200 employees.
- The Company owns two hydropower plants, which are leased to third parties long-term.

Licenses, authorizations and other permits

- License by NEURC for supply of electricity at regulated tariffs, dated 9 October 1996.
- License by NEURC for transmission of electricity by local electric grid, dated 19 September 1996.
- License for construction of certain buildings and equipment originated August 2014 for a five year term ending August 2019.
- License for high danger activities originated October 2014 for a five year term ending 8 October 2019.
- Two licenses for trading activity dated from 1 April 2011 to 31 March 2016.

Key dates

1958

Ternopil regional operational office Silenerho was established.

1960

Ternopil regional operational office Silenerho was renamed to Electricity Operations and Maintenance Department of Agriculture.

1995-1996

State Joint Stock Energy Company "Ternopiloblenergo" was established.

1999

State Joint Stock Energy Company Ternopiloblenergo was renamed to Public Joint Stock Company Ternopiloblenergo at the general meeting of shareholders.

1999-2000

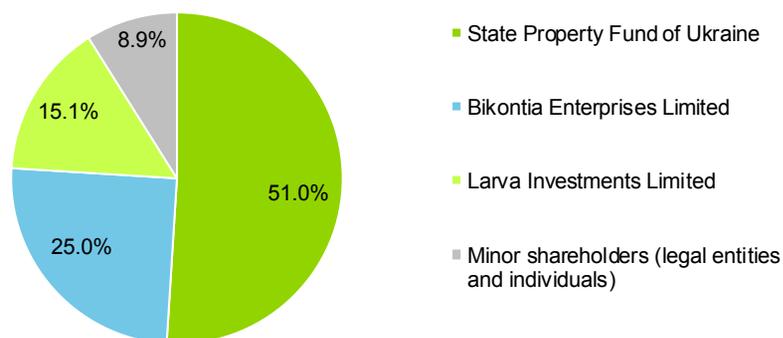
SPFU sold 49 percent share of Ternopiloblenergo via stock exchanges and auctions.

1.2.1 Business Overview

Ternopiloblenergo

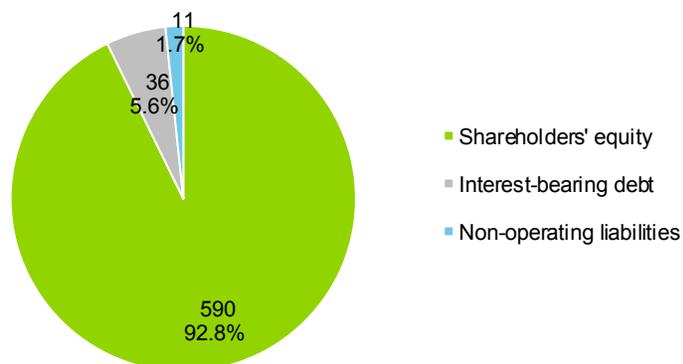
Ownership structure and description of minority shareholders

Ownership structure



Source: Management information

Capital structure (book value) as at 30 September 2015, UAHm



Source: Management information

Minority shareholders

- Offshore companies including Larva Investments Limited and Bikontia Enterprises Limited are associated with K. Grigorishin and I. Kolomoysky.
- Mr. Grigorishin is a Russian citizen and currently holds interests ranging from 6 to 100 percent ownership in 11 oblenergos in Ukraine. In addition, he is the owner of Zaporozhyatransformator – the largest supplier of substations in Ukraine.
- I. Kolomoysky is the owner of one of the largest Ukrainian financial-industrial group Privat Group. Privat Group currently holds interests ranging from 5 to 49 percent ownership in five oblenergos in Ukraine.
- Per management there is a corporate conflict between minority shareholders.

Capital structure (book value)

- The business is primarily financed through shareholder's equity, which amounted to UAH 590m or 93 percent of total capital as of 30 September 2015.
- Net debt is comprised of short-term banking loans received from state-owned Oshchadbank and Khreschatyk Bank.
- Non-operating liabilities are represented by notes payable due to Poltavaoblenergo and Lvivoblenergo (see Section 1.2.3 for details).

1.2.1 Business Overview

Ternopiloblenergo

Key assets

Fixed assets as at 30 September 2015

UAHm	Cost	Net book value	Worn-out ratio, %
Buildings and constructions	921	464	49.6%
Machinery and equipment	562	132	76.6%
Vehicles	64	9	86.2%
Tools and equipment	10	3	69.3%
Other assets	13	-	100.0%
Total	1,569	607	61.3%

Source: Management information

Key assets overview

- 76 percent or UAH 464m of fixed assets as of 30 September 2015 is represented by buildings (incl. power transmission lines), which are depreciated by 50 percent.
- 23,131 km of power lines are overhead and 967 km – cable.
- NBV of machinery and equipment comprised UAH 132m with 77 percent worn-out ratio as of 30 September 2015.
- Total capacities of power stations are about 3,000m kWh.
- Please refer to Section 1.2.4 for details on Investment Requirements of the company.

Power lines by capacity as of 31 December 2014

km	Overhead power lines	Cable power lines
110 kV	856	-
35 kV	1,395	-
10 kV	8,723	533
<0.5 kV	12,157	434
Total	23,131	967

Source: Management information

Power stations number by voltage

	Number	MVA
110 kV	41	776
35 kV	112	352
PDS ¹ 10 kV	65	26
Total	218	1,154

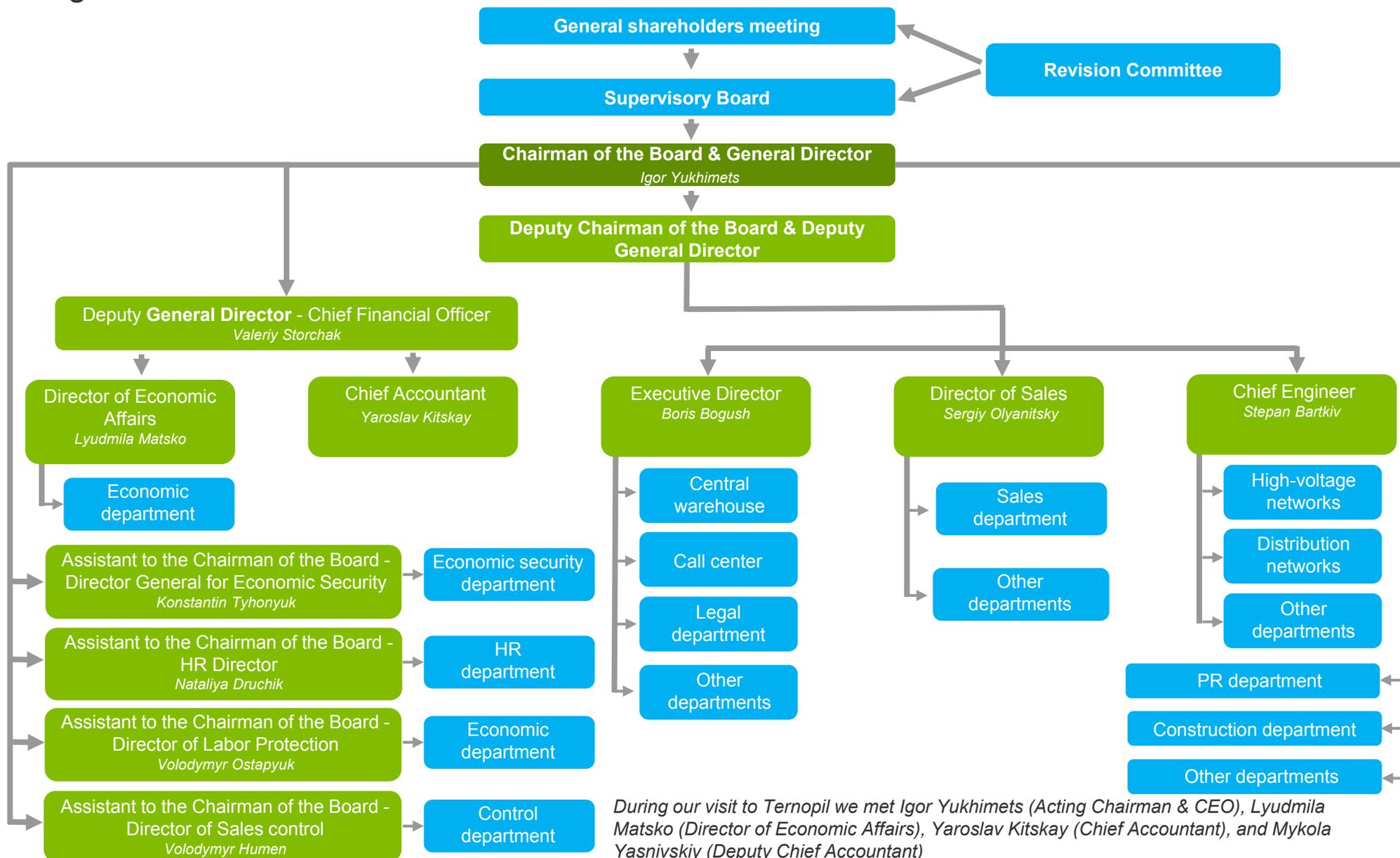
Notes: (1) Power distribution stations

Source: Management information

1.2.1 Business Overview

Ternopiloblenergo

Organization Chart

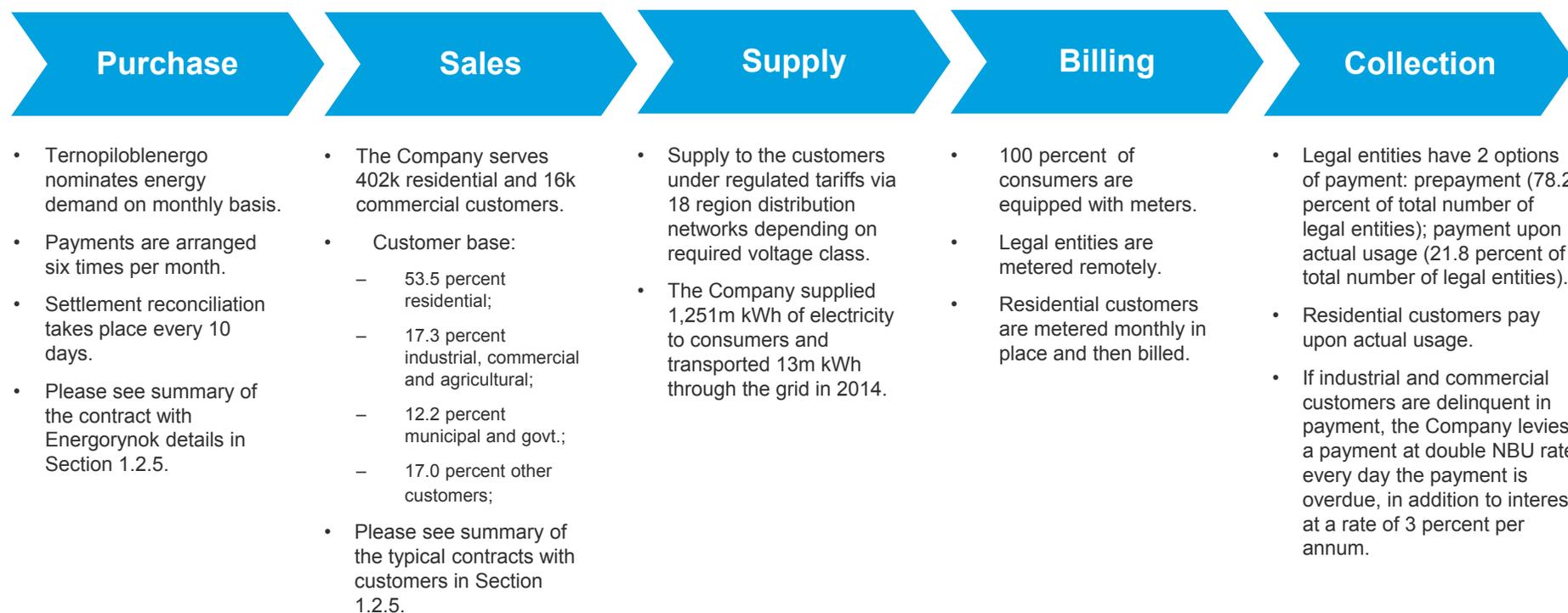


During our visit to Ternopil we met Igor Yukhimets (Acting Chairman & CEO), Lyudmila Matsko (Director of Economic Affairs), Yaroslav Kitskay (Chief Accountant), and Mykola Yasnivskiy (Deputy Chief Accountant)

1.2.2 Operational Characteristics

Ternopiloblenergo

Customer service, billing, collection capabilities



1.2.2 Operational Characteristics

Ternopiloblenergo

Aggregate commercial and technical losses, bad debts

Electricity movements in the Ternopiloblenergo grid

m kWh	FY12	FY13	FY14	9m15
Purchased electricity	1,472	1,517	1,508	1,056
Transportation of electricity	23	16	13	13
Flow of electricity to the grid	1,497	1,532	1,528	1,071
Technical and commercial losses, actual	269	273	264	179
Actual losses, %	18.0%	17.8%	17.3%	16.7%
Normative losses, %	19.0%	18.8%	18.6%	18.5%
Electricity supply from the grid, total	1,228	1,260	1,264	892
Net electricity supply	1,215	1,246	1,251	885

Source: Management information

Aging of accounts receivable

UAHm	31 Dec 12	31 Dec 13	31 Dec 14
Accounts receivable, incl.:			
less 3 months	15	14	72
from 3 to 6 months	2	2	1
from 6 to 12 months	3	1	5
over 12 months	3	1	1
Bad debt provision	(2)	(1)	(1)
Total	22	18	78
Provision for doubtful debts to total accounts receivable, %	7.4%	4.5%	1.2%

Source: Management information, Deloitte analysis

Commercial and technical losses

- The percentage of actual losses includes commercial and technical losses during the period as the share in total flow of electricity to the grid. Normative losses are provided by NEURC.
- Level of actual technical and commercial losses decreased from 18.0 percent in 2012 to 16.7 percent for 9 month 2015, which is 1.8 p.p. less than normative level of losses for the period.

Bad debts

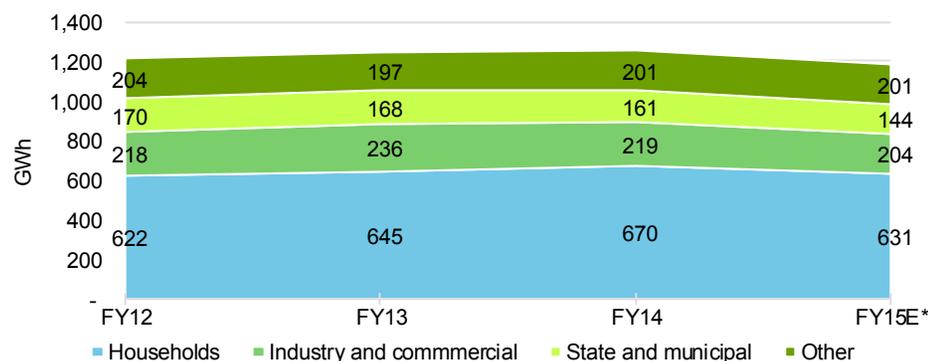
- According to the accounting policy, recalculation of bad debt reserve is to be performed for each counterparty applying following coefficients:
 - for balances with origination date from 3 months up to 6 months – 5 percent;
 - between 6 and 12 months – 10 percent;
 - over 12 months – 50 percent.
- Analysis of account receivables aging is not available as of 30 September 2015, because management prepares such analysis on an annual basis.

1.2.2 Operational Characteristics

Ternopiloblenergo

Electricity customers served

Sale volume



Note: *Annualized data for 9m15
Source: Management information

Top 3 customers in 2014 - 9m15

# Company	2014		9m15	
	GWh	% of total	GWh	% of total
1 Texterno	6	0.5%	6	0.6%
2 Ternopil dairy factory	6	0.5%	5	0.6%
3 Vatra-Ukr	5	0.4%	3	0.3%
Electrified public transport	6	0.5%	5	0.6%
Agricultural production customers	48	3.8%	30	3.4%
Other	1,180	94.3%	836	94.5%
Total	1,251	100.0%	885	100.0%

Source: Management information

Customer base

- Households represent the largest group of customers, which consumed 53.5 percent of electricity supplied by Ternopiloblenergo during 9 month 2015. The share of industrial and commercial consumption equaled to 17.3 percent, while state and municipal consumers equaled 12.2 percent.
- Consumption of electricity by households demonstrated stable growth during 2012-2014 with 3.8 percent CAGR.
- Electricity consumption by industrial, agricultural and commercial customers, state and municipal customers remained stable over the past four years, despite the current economic crisis.
- Per management, sales demonstrate seasonality with peak in the winter period because of large share of households in total consumption.

Overview of key customers

- The Company's revenue is not concentrated.
- Texterno is the largest producer of cotton in Ukraine, the only enterprise with a complete closed cycle of production.
- Vatra Corporation is lightning manufacturing company, offering wide range of products for industrial and commercial entities, offices and administrative buildings, road lightning and other.

1.2.3 Financial Statement Analysis

Ternopiloblenergo

Income Statement Analysis

Statement of financial performance

UAHm	FY12	FY13	FY14	9m15	Δ ¹ , %
Revenue	655	721	787	699	18.4%
Cost of goods sold	(546)	(595)	(699)	(581)	10.8%
Gross profit	109	126	88	118	78.7%
Operating income and expenses					
Administrative expenses	(15)	(17)	(18)	(13)	(3.4%)
Distribution expenses	(33)	(32)	(33)	(20)	(18.2%)
Other operating income	11	12	8	7	13.3%
Other operating expenses	(6)	(6)	(7)	(7)	32.2%
EBITDA	66	83	38	84	198.3%
Normalized EBITDA	66	77	35	82	217.1%
Depreciation	(52)	(60)	(55)	(44)	5.9%
Financial income	0	0	7	0	(99.8%)
Financial expense	(9)	(6)	(7)	(8)	47.7%
Other non-operating income, net	-	0	-	-	n/a
Income tax	1	(4)	2	(3)	(238.2%)
Profit after tax	6	13	(16)	30	n/a
% Gross profit margin	16.6%	17.5%	11.1%	16.8%	
% EBITDA margin	10.0%	11.5%	4.8%	12.0%	
% Normalized EBITDA margin	10.0%	10.7%	4.4%	11.8%	

Note: [1] annualized for 9m15

Source: Management information, Deloitte analysis

EBITDA normalizations

UAHm	FY12	FY13	FY14	9m15
Adjusted EBITDA	66	83	38	84
N 1. Reclassification of liquidated fixed assets	-	(4)	(2)	(2)
N 2. Reclassification of income from assets received free of charge	-	(2)	(1)	(0)
Normalized EBITDA	66	77	35	82

Source: Management information, Deloitte analysis

Income statement overview

- Over the last four years, **revenue** grew mainly due to stable growth in residential consumption (from 622m kWh in 2012 to 670m kWh) as well as increases in tariffs. Transit revenue amounted to UAH 2.5m in 9m15.
- 77.1 percent of **cost of goods sold** during 9m15 totaling UAH 448m is represented by cost of purchased electricity mostly from Energorynok. Salary of production personnel equaled to 13.8 percent of cost of sales or UAH 80m during 9m15. Average monthly salary of production personnel increased from UAH 3.0k in 2012 to UAH 3.6k in 9m15.
- Per management, the decrease in gross profit margin in 2014 was explained by the time lag in tariff growth for purchased electricity (by 22 percent in 2014 YoY) and selling tariffs (9 percent YoY). Due to high inflation in 2014, actual expenses exceeded planned, which was not reimbursed by tariffs.
- Salary of administrative personnel totaling UAH 30m during 9m15 constitutes about 88.5 percent of **administrative and distribution expenses**.

1.2.3 Financial Statement Analysis

Ternopiloblenergo

Balance Sheet Analysis

Statement of financial position

UAHm	31 Dec 12	31 Dec 13	31 Dec 14	30 Sep 15	Δ, %
Property, plant & equipment, net	598	635	626	607	(3.0)%
Intangible assets, net	2	2	4	6	39.5%
Investment property	2	3	3	3	0.0%
CIP	7	8	6	11	80.0%
Non-current assets, net	609	648	639	627	(1.9)%
Inventory	13	11	12	13	13.8%
Accounts receivable, net	22	18	78	85	9.3%
Advances issued	1	10	4	13	259.5%
Advances received	(27)	(39)	(47)	(63)	33.2%
Accounts payable	(7)	(4)	(71)	(41)	(41.8)%
Payroll payable and related taxes	(23)	(24)	(24)	(12)	(47.2)%
VAT and other payables for taxes, net	(12)	(4)	-	(5)	n/a
Other current assets	1	2	2	7	343.8%
Other current liabilities	(3)	(3)	(2)	(1)	(25.0)%
Net working capital	(36)	(34)	(49)	(4)	(92.6)%
Deferred tax assets	5	-	-	-	n/a
Total	578	613	591	624	5.6%
Financed by:					
Bank loans	16	25	29	36	21.1%
Cash and cash equivalents	(2)	(19)	(16)	(13)	(17.2)%
Interest-bearing net debt	14	6	14	23	65.0%
Non-operating liabilities					
Notes payable	21	18	15	11	(27.6)%
Net debt	35	24	28	33	17.4%
Deferred tax liabilities	-	3	1	1	0.0%
Shareholders' equity	543	587	562	590	4.9%
Total	578	613	591	624	5.5%
Net debt / EBITDA	0.53x	0.29x	0.75x	0.52x	
Accounts receivable turnover, days	12	9	36	33	
Accounts payable turnover, days	5	3	37	20	
Current Ratio	0.5	0.5	0.7	1.0	
Quick Ratio	0.3	0.4	0.6	0.9	

Source: Management information, Deloitte analysis

Balance Sheet overview

- **Fixed assets:** UAH 464m (or 76 percent) of fixed assets are buildings, and UAH 132m (or 21 percent) are equipment. NBV of 2 hydropower stations amounted to UAH 9m as of 30 September 2015. Fixed assets were last independently valued in 2013 for IFRS financial statements purposes.
- **Accounts receivable** increased from UAH 18m as of December 2013 to UAH 78m as of December 2014. Management did not provided us with the breakdown of accounts receivables.
- **Advances received** are comprised of prepayments for electricity from customers.
- **Accounts payable** significantly increased from UAH 4m as of December 2013 to UAH 71m as of December 2014, mainly due to increased payables due to Energorynok by UAH 69m during the period. The Company decreased payables due to Energorynok by UAH 39m during 9m15.
- **Payroll payable and related taxes** decreased by a half during 9m15 due to utilization of unused vacation days.
- **Bank loans:** The Company utilizes short-term bank loans to cover monthly liquidity gaps arising due to the time lag between payment for purchased electricity from Energorynok and proceeds from customers, mainly from households. As of September 2015, credit lines included UAH 33m from Oshchadbank and UAH 3m from Khreshchatyk Bank.
- **Notes payable** were issued to repay the debt for electricity due to Energorynok. Poltavaoblenergo and Lvivoblenergo are holders of notes payable. In 4Q15 the Company repaid debt due to Lvivoblenergo in full. Notes payable due to Poltavaoblenergo should be repaid semi-annually till 2024.

1.2.3 Financial Statement Analysis

Ternopiloblenergo

Cash Flow Statement Analysis

Cash Flow Statement

UAHm	FY12	FY13	FY14	9m15
Operating activities				
Sales ¹	774	875	965	847
Advances from customers	11	3	-	-
Other proceeds	7	3	7	4
Less cash paid for:				
Goods	(535)	(603)	(699)	(653)
Payroll expenses	(116)	(129)	(136)	(102)
Other expenditures	(17)	(13)	(32)	(19)
Income tax paid	-	-	-	-
Tax and fees liabilities	(45)	(60)	(59)	(53)
Net cash flow from operating activities	78	76	46	24
Cash flows from investing activities				
Purchases of property, plant and equipment	(68)	(63)	(53)	(33)
Proceeds from sale of fixed assets	-	-	-	-
Net cash used in investing activities	(68)	(63)	(53)	(33)
Cash flows from financing activities				
Obtaining loans	144	107	76	53
Repayment of loans	(148)	(97)	(72)	(47)
Other revenues	-	-	0.5	0.0
Dividends	(2)	(1)	(2)	-
Other payments	(5)	(4)	-	-
Net cash provided by financing activities	(10)	4	3	6
Net cash flow for the reporting period	1	17	(4)	(3)
Balance at beginning of year	1	2	19	16
Balance at the end of the year	2	19	16	13
Sales excluding VAT	645	729	804	706
Cash conversion ratio	98.5%	101.1%	102.2%	101.0%

Note: (1) - including VAT

Source: Management information, Deloitte analysis

Cash flow overview

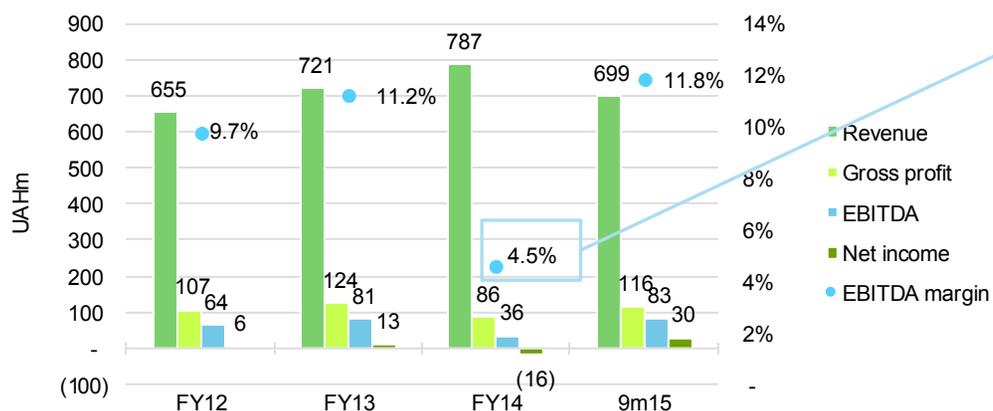
- **Operating activities:** Due to reliable payment history of its consumers, the Company reached approximately 100 percent cash collection ratio during 2012-9m15.
- **Investment activities:** The Company uses cash flow received from operating activities to finance its capex. Please see Section 1.2.4 for more details on capex.
- **Bank loans:** The Company uses short-term funds from banks for financing liquidity gaps. In 2014-9m15 bank loans were mainly provided by credit line from Oshchadbank and Khreschatyk Bank.
- **Dividends:** On average, the Company spends 30 percent of net profit on dividends. According to the resolution of the Cabinet of Ministers of Ukraine №33 from 29 January 2014, joint-stock electric power companies with the state stake of more than 50 percent are obliged to pay dividends of 30 percent of the net profit if the Company has not made a decision on dividends until May 1 of the year following the reporting. In 2014, the Company did not make a decision on dividends, but was obliged to pay UAH 1.9m to the government.

1.2.3 Financial Statement Analysis

Ternopiloblenergo

Operating profitability analysis

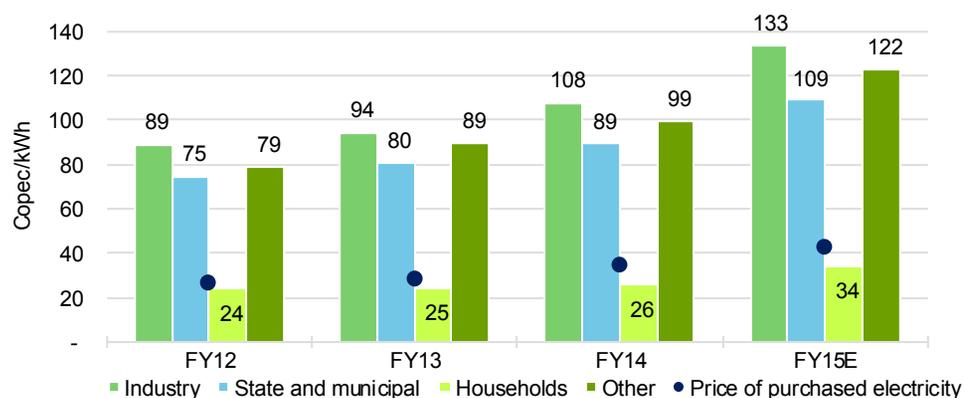
Revenue and profitability dynamics



Source: Management information

Decrease of profitability in 2014 was largely due to unbalanced changes in tariffs: Energorynok tariffs grew faster than tariffs for customers

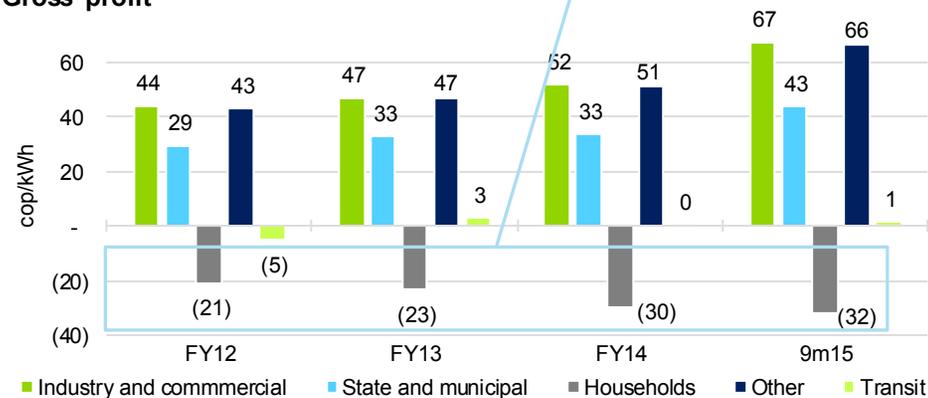
Revenue per kWh by consumers



Source: Management information

Residential tariffs have historically been highly subsidized and lower than cost

Gross profit



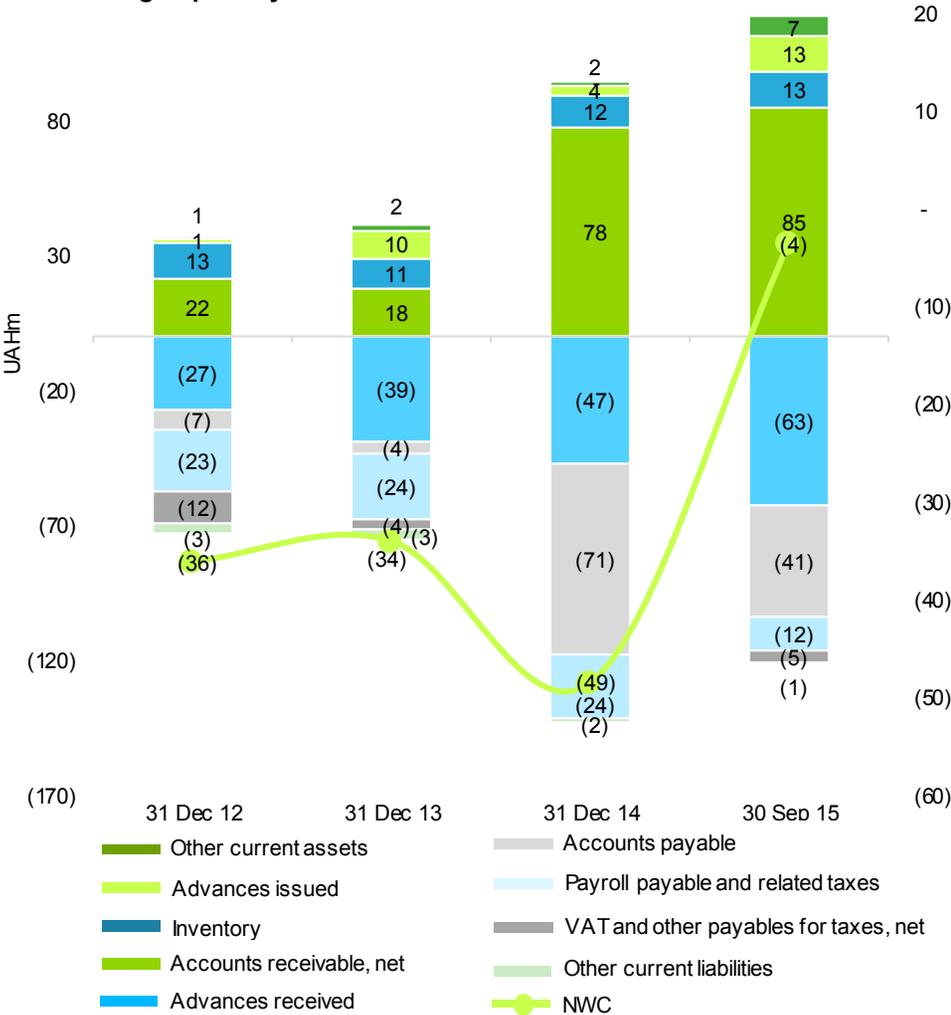
Note: Gross profit is estimated based on wheithed average cost of purchased electricity
Source: Management information, Deloitte analysis

1.2.3 Financial Statement Analysis

Ternopiloblenergo

Liquidity analysis

Net working capital dynamics



Liquidity analysis

- Significant increased in accounts payables were due to a liquidity shortage and, as a result, non-payment for electricity to Energorynok during 2014.
- UAH 39m repayment of payables for purchased electricity to Energorynok was the major reason of UAH 45m working capital increase during 9m15.

Normalized net working capital

UAHm	31 Dec 12	31 Dec 13	31 Dec 14	30 Sep 15
NWC before normalizations	(36)	(34)	(49)	(4)
Normalizations				
[1] Non-accrual of additional accounts receivables for consumed electricity by households after metering on sites in 2014	-	-	(54)	(49)
[2] AP due to Energorynok	-	-	73	34
NWC normalized	(36)	(34)	(29)	(19)
Normalized NWC to revenue, %	(5.5%)	(4.7%)	(3.7%)	(2.7%)

Source: Management information, Deloitte analysis

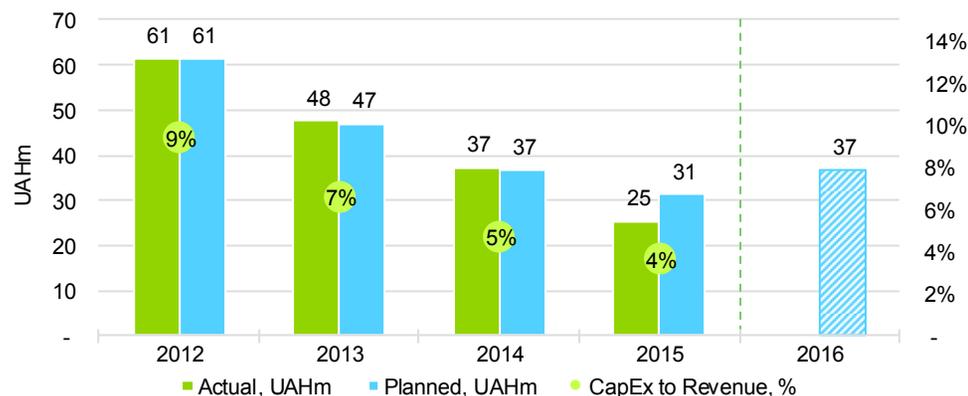
Source: Management information, Deloitte analysis

1.2.4 Future Capital Expenditures

Ternopiloblenergo

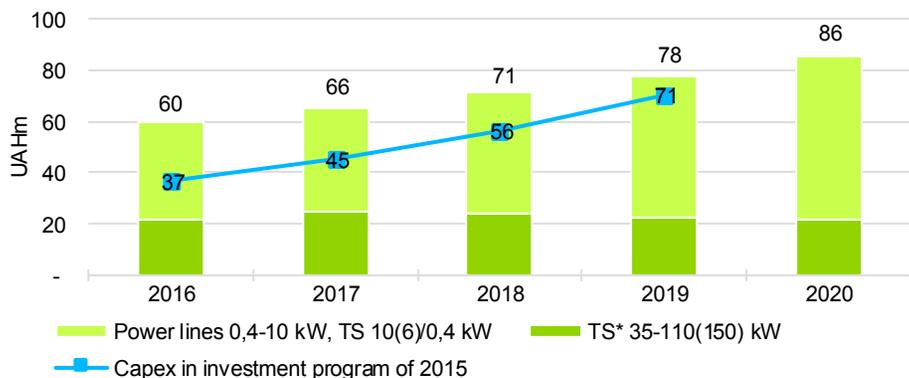
Investment Requirements and Timing of Planned Investments

Capex according to investment program for 2012 - 2016



Source: Management information

Capex needs in prices of 2015



Note: Transformer substation
Source: Ministry of Energy and Coal Industry of Ukraine

Historical Capital Expenditure

- Historically, the Company has executed its investment program in full. In 2015, planned capex was not achieved by the Company for the first time in years due to necessary to decrease accounts payable due to Energorynok (by UAH 52m) accumulated in 2014.
- Actual capex for 2015 amounted to UAH 25m or 81 percent of the plan.
- UAH 21.6m (87 percent of the target level) was spent on technical development (upgrades), including modernization and construction of electrical networks and equipment. 50km of new power lines were constructed in 2015.
- The planned capital repair was archived in 2015 and amounted to UAH 32m.

Capital Expenditure Needs

- Ministry of Energy and Coal Industry of Ukraine has developed a plan of development of power distribution networks for 2016-2020 for each disco in the context of implementation of the Law of Ukraine "On principles of functioning electricity market of Ukraine".
- According to this program, total investment needs of the Company are estimated at UAH 360m for 2016-2020.

1.2.5 Contract Summary

Ternopiloblenergo

Major suppliers and other third party contracts

	Period	Terms of delivery	Payment	Fines	Other
Contract with Energorynok	Till the end of the year, automatically prolonged for each subsequent year if both sides of the contract have provided 30-day termination notice.	Energorynok provides dispatching services and services on transit of electricity by long-distance and interstate electric grid; Actual volume of received electricity at the Oblenergo delivery points is determined based on hourly data of system of commercial accounting.	First part (more than 5% of forecasted (ordered) amount) - till 12am of 1 st day of the month; All other parts more than 10%, 20%, 15%, 20% of forecasted amount - till 6 th , 11 th , 15 th , 21 st days of the month, respectively. Till 26 th Oblenergo has to pay the rest of forecasted amount for the month. In three days after the end of the month Oblenergo has to pay the rest of actual supplies amount for the month. In case of excess of actual amount over forecasted (ordered), Oblenergo has to pay in full in 3 days of every period.	Non-payment in 1 st day after the end of "period" - 0.05% from the remaining amount to be paid in 3 days. Non-payment after 20 th days of the next month - 0.2% from the remaining amount for every day of overdue (no more than double NBU discount rate) and additional fine 0.1% from the remaining amount. In case of untimely consumption volume providing, a fine of 15x minimum monthly salary. In case of providing a wrong consumption volume, 3% of excess of actual volume over forecasted (ordered). In case of excess (over 5%) of actual amount over forecasted (ordered), Oblenergo has to pay 1% of difference between actual volume from forecasted (ordered).	Message about ordered monthly volume of electricity purchase has to be provided the next day after adoption of the resolution by NEURC. Energorynok has the right to limit electricity supply if Oblenergo does not pay in full or by dates.
Typical contract with Legal entity	For a calendar year, automatically prolonged for each subsequent year if both sides of the contract have not expressed their willingness to terminate or change the contract within 30 days of expiration.	Volumes are determined for the year till the 15 th October of previous year by Consumer; Consumer has to provide monthly reports about consumed electricity.	There are 2 types of payment process: prepayment, payment upon actual usage.	Double NBU discount rate for every day of overdue + 3% annual + inflation index; In case of excess over agreed volume of consumption and capacity, double tariff for difference.	Technical standards and volumes of electricity stated in the contract.
Typical contract with Individuals	Signed for 3 years, and is prolonged automatically for 1 year if both sides of the contract have not expressed their willingness to make any changes to the contract a month before maturity; The contract could be terminated in the case if the consumer change the place of living and stop consuming electricity.	The company is obliged to provide planned audit, maintenance, and repair of meters free of charge; The company is obliged to conduct the checking indications on meters equipment.	Payment are made according to current tariffs and volume of consumed electricity during the period stated in the invoice; In the case of changing tariffs, the company is obliged to inform the customer no more than 5 days before new tariff implementation; In the case of providing electricity at different technical standards mentioned in the contract, customer can pay 25% of payment.	In case of missed payment for electricity, consumer has to pay penalty of 0.1% but no more than 100% of missed payment.	Technical standards of electricity stated in the contract.

1.3 Preliminary Due Diligence

Kharkivoblenergo

1.3.1 Business Overview

Kharkivoblenergo

Location, Facts & Figures on Market Served



Overview

- The Kharkiv oblast has a primarily industrial based economy, including engineering, metallurgy, manufacturing, production of chemicals and food processing. The city of Kharkiv is the second-largest in Ukraine by population.
- Kharkivoblenergo is one of the five largest power distribution companies in Ukraine and one of the three largest taxpayers in the Kharkiv oblast.
- Service territory covers 32,000 sq. km and serves 1.2 million residential and 33 thousand commercial customers.
- 6,731 employees.

Licenses and permits

- License for supply of electricity at regulated tariffs, dated 19 September 1996.
- License for transmission of electricity by local electric grid, dated 19 September 1996.
- Six permits for special water use.
- Eight permits for pollutant emissions into atmosphere by stationary sources.

Key dates

November 1929

Kharkiv association of state power stations was established.

1940

Total power generating capacity was 169.5 MW. There were 13 substations with a total transformer capacity of 198.6 MVA. Total electricity production amounted to 773 GWh.

March 1973

The state regional energy company was reorganized into Industrial Energy Association "Harkovenergo", one of the largest energy systems of Ukraine.

September 1995

In accordance with the Presidential Decree № 82/95, Industrial Energy Association "Harkovenergo" was registered as a State Joint Stock Utility Company "Kharkivoblenergo".

August 1997

The State Property Fund of Ukraine made a decision on the privatization of the company SJSEC "Kharkivoblenergo". By 2002, 35 percent of shares were sold to private investors.

March 2000

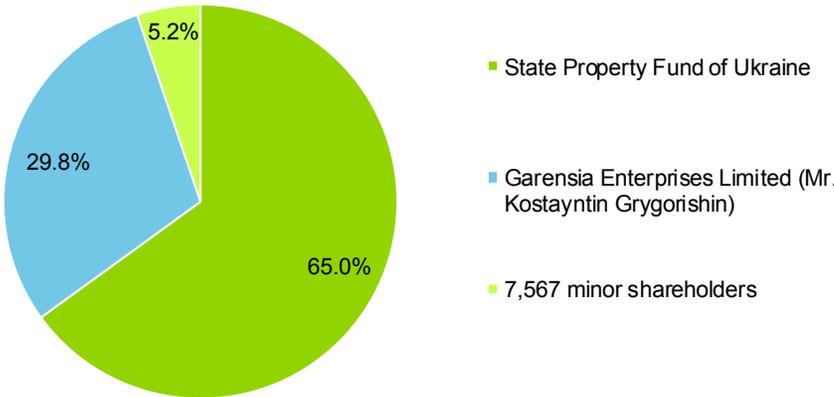
SJSEC "Kharkivoblenergo" was renamed to the Joint Stock Company "Kharkivoblenergo" at the general meeting of shareholders.

1.3.1 Business Overview

Kharkivoblenergo

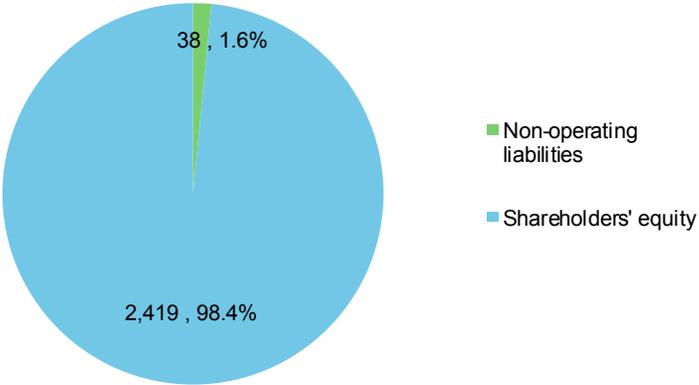
Ownership structure and description of minority shareholders

Ownership structure



Source: Management information

Capital structure (book value) as at 30 September 2015, UAHm



Source: Management information

Minority shareholders

- Garensia Enterprises Limited acquired a 28.8 percent interest in 2010, and has since increased it to the current 29.8 percent share.
- As the top shareholder of Energy Standard Group (“ESG”), Mr. Grigorishin – a Russian citizen – is one of the largest players on the Ukrainian energy industry. Through his investment vehicles, Mr. Grigorishin currently holds interests ranging from 6 to 100 percent ownership in 11 oblenergos in Ukraine, in addition to several large enterprises that manufacture equipment used by oblenergos throughout Ukraine.
- Minor shareholders include approximately 7,600 individuals and legal entities.

Capital structure (book value)

- There is no interest bearing debt in the company’s capital structure. Based on discussions with management, we understand that all capital expenditures are financed through cash from operations and equity capital due to the current interest rate environment in Ukraine.
- Lack of debt in capital structure could increase attractiveness of investment, as an international investor with access to foreign debt markets could finance capital expenditures with debt to maximize return on equity.
- In the chart to the left, we’ve adjusted debt for the following non-operating liabilities (see Section 1.3.3 for details):
 - UAH 22m accounts payable for securities,
 - UAH 13m fines and penalties due to Energorynok,
 - UAH 2m dividends payable,
 - UAH 2m accounts payable related to construction works.

1.3.1 Business Overview

Kharkivoblenergo

Overview of key assets

Fixed assets as at 30 September 2015

UAHm	Cost	Net book value	Worn-out ratio, %
Transmission equipment	1,429	1,026	28.2%
Machinery and equipment	798	526	34.1%
Buildings and constructions	283	238	15.9%
Vehicles	52	25	51.2%
Other assets	38	15	60.8%
Total	2,600	1,830	29.6%

Source: Management information

Fixed assets overview

- Majority of fixed assets, including the largest component – transmission equipment – is 25-50 years old. 15.4% of fixed assets by cost are over 50 years old.
- Fixed assets were 29.6% depreciated as of 30 September 2015.
- Please see details on capex needs analysis in Section 1.3.4.

Power lines by capacity as at 31 December 2014

km	Overhead power lines	Cable power lines
154 kV	17	-
110 kV	3,523	-
35 kV	3,465	6
10 kV	13,397	1,337
6 kV	1,032	3,335
3 kV	-	6
0.5 kV	19,596	2,553
Total	41,030	7,237

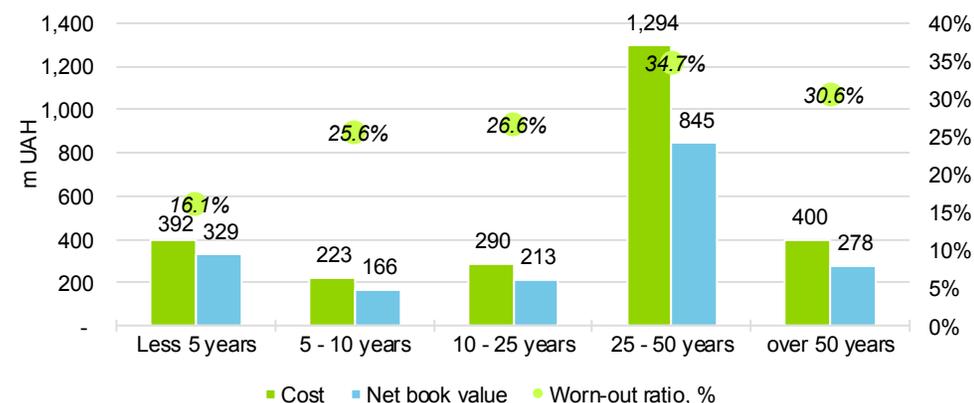
Source: Management information

Power stations number by voltage

	Number	MVA
35 kV	195	1,000
110 kV	92	3,896
150 kV	1	247
20-35/0,4 kV	10,841	3,054
PDS ¹ 6-20 kV	273	n/a
incl. PDS ¹ with power transformers	214	178
Total	11,402	8,197

Notes: (1) Power distribution stations
Source: Management information

Fixed assets by age as at 30 September 2015

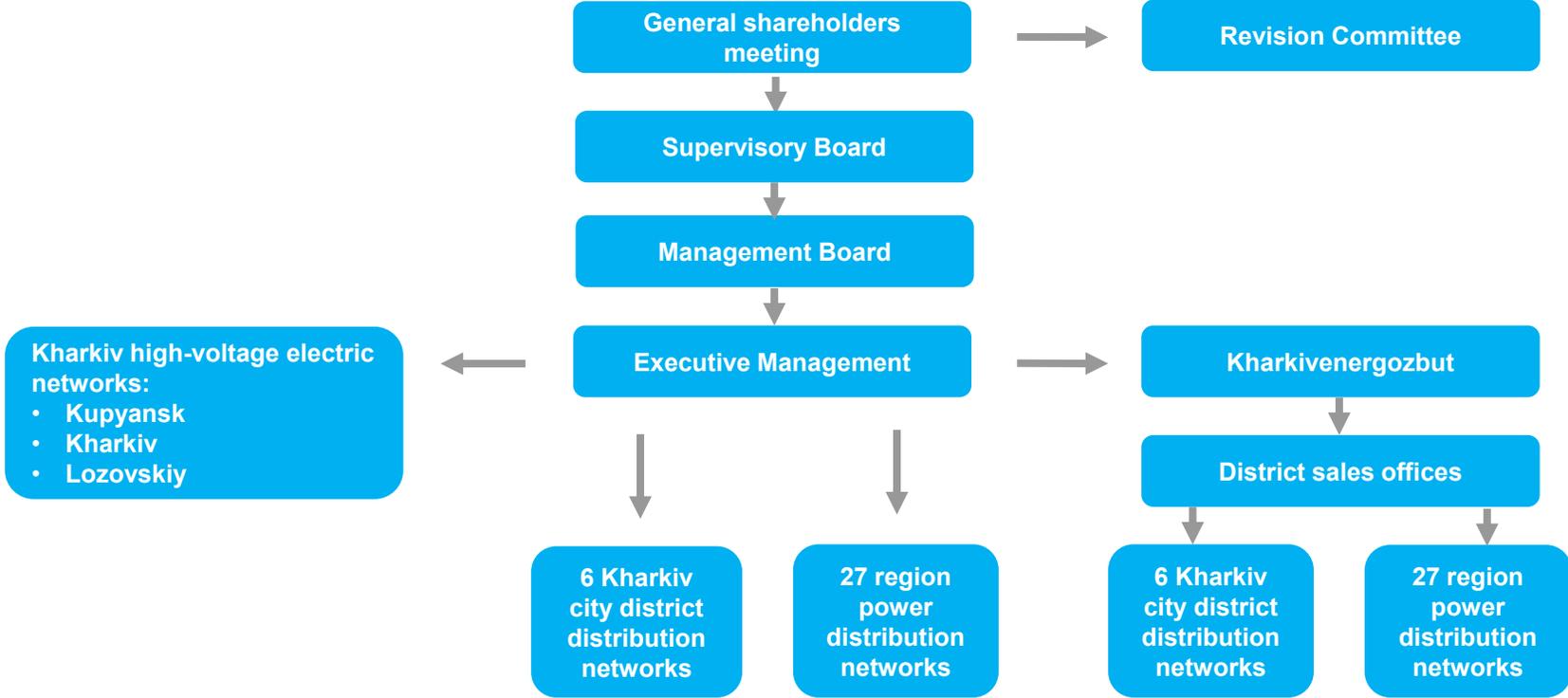


Source: Management information

1.3.1 Business Overview

Kharkivoblenergo

Management Team and Organization Chart



Management team (Management Board and Executive Management)

Dmitriy Isaev Chief Accountant	Alexey Hanus First Deputy Chairman of the Board Technical Director	Alexander Sviridov Deputy Chairman of the Board Director of Economics	Volodymyr Yavorsky Acting Chairman of the Board	Vasiliy Skopenko Deputy Chairman of the Board Director of Kharkivenergozbut	Tatiana Maksimenko Director of HR and Social Affairs	Sergey Panasenko Director of Labor Protection
------------------------------------------	---------------------------------------------------------------------------------	------------------------------------------------------------------------------------	-----------------------------------------------------------	------------------------------------------------------------------------------------------	----------------------------------------------------------------	---------------------------------------------------------

During our visit to Kharkiv we met V. Yavorsky (Acting Chairman of the Board), A. Hanus (Technical Director), V. Skopenko (Director of Kharkivenergozbut), A. Sviridov (Director of Economics) and Dmitriy Isaev (Chief Accountant).

1.3.2 Operational Characteristics

Kharkivoblenergo

Customer service, billing, collection capabilities



- Purchase**
 - The company nominates energy demand on monthly basis, typically on the 15th
 - Daily settlements on actual offtake with Energorynok
 - Settlement reconciliation takes place every 10 days
 - Accounts payable due to Energorynok amounted to UAH 64m as of 30 September 2015 for electricity supplied in May 2015
 - Please see summary of the contract with Energorynok details in Section 1.3.5
- Sales**
 - Distribution and supply functions have already been functionally separated
 - Sales function takes place at Kharkivenergozbut business unit
 - Legal entities generally prepay for electricity, residential customers pay upon actual usage.
 - Please see summary of the typical contracts with customers in Section 1.3.5
- Supply**
 - Supply to customers under the regulated tariff and transit via six city and 27 region distribution networks, depending on required voltage class.
 - Electricity supply from the grid amounted to 6,423 GWh in 2014 and 4,431 GWh in 9m15.
- Billing**
 - Legal entities are metered remotely. Commercial accounting systems are integrated with the billing system.
 - Residential customers are metered monthly at local meters and billed according to monthly usage.
- Collection**
 - Cash collection rate for residential customers is nearly 100 percent. Any delinquent residential customers pay late fees and can be cut off, with an additional fee upon reconnection.
 - Cash collection rate for commercial and industrial customers has declined significantly in last two years. Certain such customers can not be legally cut off.
 - The company does not have full control over cash received from customers. The company has an account in the state-owned Oshchadbank to which all payments from customers are transferred and then distributed based on an “algorithm” set by NEURC. This algorithm sets the percentage of cash flows received from customers to Kharkivoblenergo and to Energorynok. The rate historically received by the company ranged from 14-17 percent.
 - NEURC can alter the algorithm if the company is delinquent in payments to Energorynok.

1.3.2 Operational Characteristics

Kharkivoblenergo

Aggregate commercial and technical losses, bad debts

Electricity movements in the Kharkivoblenergo grid

m kWh	FY12	FY13	FY14	9m15
Purchased electricity	6,514	6,549	6,427	4,420
Transportation of electricity	1,065	945	938	616
Flow of electricity to the grid	7,579	7,494	7,364	5,036
Technical and commercial losses, actual	1,049	977	916	591
Actual losses, %	13.8%	13.0%	12.4%	11.7%
Normative losses, %	n/d	14.6%	14.3%	14.2%
Production needs	27	27	25	14
Electricity supply from the grid, total	6,503	6,490	6,423	4,431
Electricity supply to consumers at unregulated tariff	897	795	782	519
Electricity supply to isolated generating plants	29	28	34	20
Net electricity supply	5,577	5,667	5,607	3,892

Source: Management information

Trade and other accounts receivable

UAHm	31 Dec 12	31 Dec 13	31 Dec 14	30 Sep 15
For electricity, incl.:				
legal entities	229	271	441	672
<i>including Kharkivvodokanal</i>	n/d	162	315	486
individuals	194	201	257	237
Other	2	2	5	7
Provision for doubtful debts	(227)	(203)	(200)	(198)
Accounts receivable, net	198	270	503	718
<i>Provision for doubtful debts to total accounts receivable</i>	53.4%	42.9%	28.5%	21.6%

Source: Management information, Deloitte analysis

The Company accrues provision for bad debt according to the Cabinet of Ministers Resolution (# 1673) on state enterprises – they are not allowed to classify accounts receivable less than 1.5-years old as bad debt.

Commercial and technical losses

- Aggregate technical and commercial losses amounted to 13.8 percent in 2012, and decreased to 11.7 percent in 9m15. Approximately 9 percent of the losses in 2015 were technical losses.
- Loss levels are closely regulated, and the company is not allowed to pass cash collection shortfalls through to customers by an increase in tariff. Abnormal losses have not been allowed to be included in the tariff since 2004.

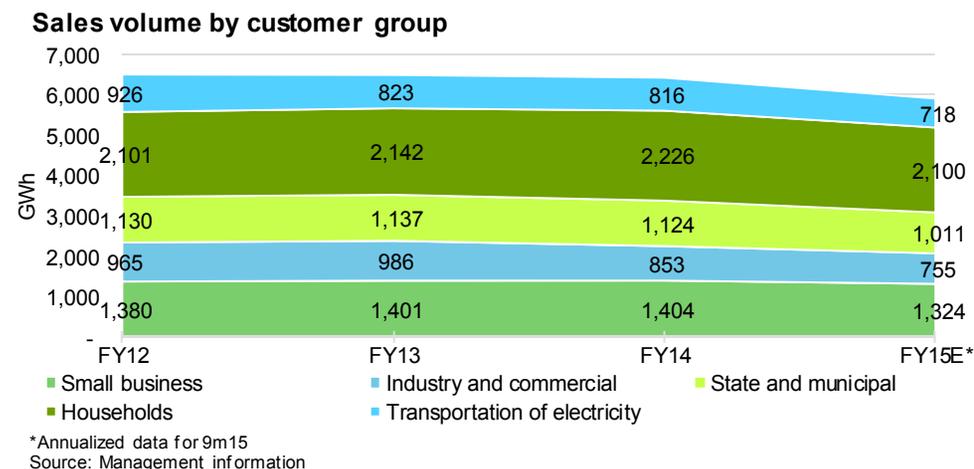
Bad debts

- As of 31 December 2015 UAH, 408m accounts receivable were overdue up to 1 year, UAH 150m from 1 to 3 years, UAH 206m more than 3 years. Total bad debt allowance amounted to UAH 198m or 26.4% of the overdue accounts receivable. We recommend to consider detailed analysis of the accounts receivable quality during next stage.
- The largest customer of the company is the Kharkiv Municipal Water Authority ("Kharkivvodokanal" or "KMWA"). Kharkivvodokanal represented approximately 10 percent of total revenue in 2015. We understand that KMWA has total receivables of nearly UAH 500 million as of September 2015, including some overdue receivables over three years old.
- The Law on Water does not permit distribution companies to cut off service to water supply companies. This has resulted in major cash shortfalls for the company. The state budget subvention has partially compensated the Company for these specific shortfalls via resolutions of the Cabinet of Ministers (UAH 228m in 2013, UAH 113m in 2014, UAH 187m in 2015).
- The Company regularly attempts to collect on overdue accounts, including court proceedings. However, despite court decisions in favor of the company, certain customers remain delinquent.
- Other overdue accounts include:
 - SE Khimprom, UAH 33m (provisioned);
 - JSC Lvivoblenergo, UAH 22m, upon which a claim is in process;
 - Kharkiv State Aviation Production Enterprise, UAH 11m; and,
 - JSC Lozovsky Forging-Mechanical Plant, UAH 10m (provisioned).

1.3.2 Operational Characteristics

Kharkivoblenergo

Electricity customers served



Top five clients for 11 months 2015

#	Company	GWh	UAHm	Share, % ¹
1	ME Kharkivvodokanal	278.2	414	9.9%
2	ME Kharkiv Heating Networks	123.3	199	4.7%
3	ME Kharkiv Metro	77.2	49	1.2%
4	ME Miskelektrotransservice	75.4	45	1.1%
5	SE plant Electrotyazhmash	43.0	61	1.4%
Total		597.1	768	18.3%

Note: (1) Estimated share of total revenue of the Company
Source: Management information

Customer base and key trends

- Households represent a significant share of customers (35.5 percent of total volume in 9m15). Based on discussions with Management, we understand that household consumption has increased since 2012 due to the use of more energy-intensive appliances and consumer electronics, as well as high unemployment, which has resulted in a higher portion of the population staying home and consuming more power.
- Consumption of commercial and industrial customers has been decreasing due to the economic downturn and the resulting decrease in industrial output. Additionally, many industrial facilities located in the Kharkiv oblast historically sold products to Russian customers and/or the Russian government.
- These trends have a negative impact on revenue, due to the difference in tariff rates between customer types (please see Section 1.3.3 for more detail).

Overview of key customers

- The top five clients of the Company include four municipal and one state-owned enterprise.
- Kharkivvodokanal consumption varies from UAH 30m per month in summer to UAH 45m per month in winter.
- Kharkiv Municipal Heating Authority has faced difficulties maintaining payments in October – when heating season begins – and historically settles its overdue payments in February.
- Generally, tariffs for municipal companies (housing and utilities) did not cover the cost of electricity prior to 2015.
- Four of the top five clients are contracted to pay either daily (Kharkivvodokanal and Heating Networks) or three times per month (Kharkiv Metro and Electrotyazhmash). Miskelektrotransservice pre-pays for service.

1.3.3 Financial Statement Analysis

Kharkivoblenergo

Income Statement Analysis

Statement of financial performance

UAHm	FY12	FY13	FY14	9m15	Δ, %
Revenue	3,397	3,656	3,948	3,438	16.1%
Cost of sales	(2,892)	(3,352)	(3,639)	(3,082)	12.9%
Gross profit	505	304	309	357	53.8%
Operating expenses					
Administrative	(60)	(65)	(66)	(54)	7.7%
Bad debt allowance change	(17)	23	2	2	(3.0%)
Other operating income	41	55	63	51	8.0%
Other operating expenses	(33)	(33)	(24)	(30)	68.3%
EBITDA	436	285	284	326	52.7%
Normalized EBITDA	445	293	292	342	56.2%
Depreciation	(319)	(179)	(245)	(155)	(15.7%)
Financial income	6	4	6	4	(21.3%)
Financial expense	(102)	(87)	(1)	(1)	8.5%
Other non-operating income, net	9	10	5	3	(4.0%)
Income tax	0.1	(3)	(19)	-	(100.0%)
Profit after tax	29	29	30	177	680.9%
% Gross profit margin	14.9%	8.3%	7.8%	10.4%	n/a
% EBITDA margin	12.8%	7.8%	7.2%	9.5%	n/a
% Normalized EBITDA margin	13.1%	8.0%	7.4%	10.0%	n/a

Source: Management information, Deloitte analysis

EBITDA normalizations

UAHm	FY12	FY13	FY14	9m15
EBITDA	436	285	284	326
N 1. Income on holding housing and social assets	(4)	(5)	(2)	(2)
N 2. Expenses on holding housing and social assets	11	12	11	8
N 3. One-off fines and penalties on debt due to Energorynok	-	-	-	13
N 4. Income on sale of non-current and other assets	(3)	(2)	(1)	(1)
N 5. Cost of sold non-current and other assets	2	2	1	1
N 6. Compensation of payments to employees on military service	-	-	-	(2)
N 7. Payments to NJSC Energy Company of Ukraine	3	1	-	-
Normalized EBITDA	445	293	292	342

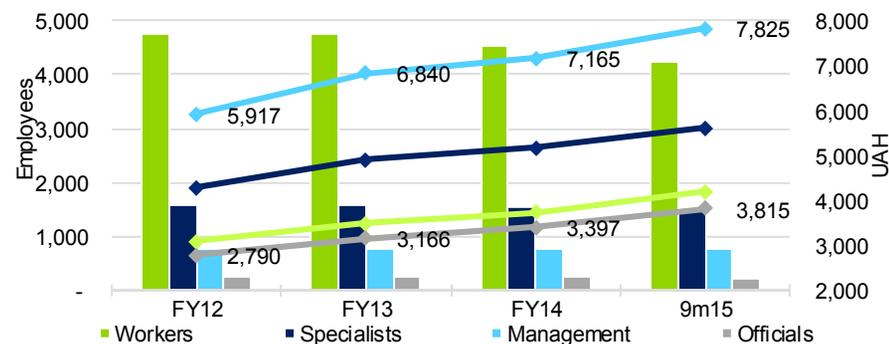
Source: Management information, Deloitte analysis

Deloitte Consulting LLP

Income statement overview

- Since 2012, revenues have increased due to an increase in regulated tariffs for industrial and commercial customers, while total sales volume has slightly decreased since 2014.
- Based on discussions with Management, we understand that seasonality is not significant due to active usage of air conditioning in summer and an increase in consumption due short winter days.
- According to Management, rates paid to Energorynok have increased faster than allowed tariff rates, which resulted in lower gross margins in 2013 and 2014.
- In 2015, the gross margin achieved by the company was partially restored with an increase in tariff rates for all customers.
- Transit revenue amounted to UAH 50m in 9m15. Transit customers are represented by 25 counterparties - small enterprises, which have NEURC licenses for energy supply under non-regulated tariffs.
- Other operating income mainly consisted of connection services, metering-related and other chargeable services, and fines and penalties for delayed payments.
- Financial expenses in 2012 and 2013 occurred due to amortization of the discount on restructured debt due to Energorynok, which was repaid in 2013.
- Salary expenses have increased over the past four years, and varied depending on the category of employees (see chart below).

Average number of employees and salary by position



Source: Management information

1.3.3 Financial Statement Analysis

Kharkivoblenergo

Balance Sheet Analysis

Statement of financial position

UAHm	31 Dec 12	31 Dec 13	31 Dec 14	30 Sep 15	Δ, %
Property, plant & equipment, net	1,882	1,852	1,956	1,830	(6.4)%
Intangible assets, net	0.4	0.2	0.3	2	n/a
Non-current financial investments	9	9	9	30	257.6%
CIP	19	38	31	89	186.5%
Non-current assets, net	1,910	1,899	1,996	1,952	(2.2)%
Inventory	27	36	34	30	(11.9)%
Accounts receivable, net	198	270	503	718	42.7%
Advances issued	5	1	2	7	343.8%
Advances received	(193)	(236)	(230)	(230)	0.1%
Accounts payable	(8)	(46)	(68)	(73)	7.3%
Payroll payable and related taxes	(15)	(19)	(19)	(21)	13.0%
VAT and other payables for taxes, net	(17)	12	(15)	(37)	148.3%
Other current assets	36	43	43	168	287.8%
Other current liabilities	(46)	(39)	(53)	(61)	16.2%
Net working capital	(14)	22	198	501	153.5%
Deferred tax asset	28	24	-	-	n/a
Other assets	1	2	2	2	0.0%
Total	1,926	1,946	2,195	2,454	11.8%
Financed by:					
Cash and cash equivalents	(66)	(70)	(83)	(28)	(66.3)%
Interest-bearing net debt/(cash)	(66)	(70)	(83)	(28)	(66.3)%
Non-operating liabilities					
Accounts payable for securities	-	-	-	22	n/a
Debt due to Energorynok	29	4	3	13	331.0%
Dividends payable	2	2	2	2	0.0%
Accounts payable due for construction	5	3	-	2	n/a
Adjusted net debt/(cash)	(29)	(61)	(78)	10	n/a
Deferred tax liability	-	-	25	25	0.0%
Shareholders' equity	1,955	2,007	2,247	2,419	7.6%
Total	1,926	1,946	2,195	2,454	11.8%
Accounts receivable turnover, days	21	27	47	57	
Accounts payable turnover, days	1	5	7	7	
Current Ratio	1.0	1.1	1.5	2.2	
Quick Ratio	0.9	1.0	1.4	2.1	
Operating Cash Flow Ratio	1.0	0.4	0.3	0.1	

Source: Management information, Deloitte analysis

Balance Sheet overview

- **Fixed assets:** Approx. UAH 1bn (or 50 percent) are comprised of transmission facilities, with the remainder consisting of buildings and other fixed assets. A significant revaluation reserve was created in 2013 (UAH 1.5bn) when IFRS was first adopted by the company. A local valuation firm in Kharkiv provided the valuation services.
- **CIP:** The company's investment plan is prepared each August for the following year, and is then reviewed and approved by NEURC. In 2012 and 2013, the majority of capex was spent on substation construction. In 2014 and 2015 the majority was spent on line maintenance and reconstruction. For multiple years, the actual amount spent on capex has been below the NEURC approved planned amount due to shortfalls in cash flow.
- **Financial investments:** In 2015, Kharkivoblenergo partially assigned its claims due from Kharkivvodokanal (approx. UAH 20-25m) to Lvivoblenergo, in return for shares of two companies (Agrokhimremont and Vidan), which appear to be of poor quality. The Ukrainian stock market regulator banned transactions of these securities due to indications of fraud. According to Management, a provision will be created in the FY15 financial statements to completely write off these investments.
- **Non-core assets:** the Company owns a recreation center located in Crimea which generated income up to 2014. The net book value of this center was approx. UAH 5m as of 30 September 2015, and according to management it has since been impaired to zero value. The Company also owns seven restaurants, healthcare centers, and residential houses, which do not generating positive net cash flow.
- **Accounts receivable** increased mainly due to the accumulated overdue accounts receivable due from Kharkivvodokanal. The tariff increase in 2015 also contributed to the increase in receivables.
- **Accounts payable:** According to management, accounts payable of UAH 64m due to Energorynok as of September 2015 has been fully repaid, and the Company held a UAH 36m prepayment as of the end of 2015.
- **Other current assets:** as of the date of this report, we have not received breakdown of other current assets. We recommend detailed analysis of this item during next stage considering its increase during last period.
- **Dividends payable:** the Company did not distribute profits by the result of 2013 and 2014, however, it accrued and paid dividends to the budget on state share according to the legislation (please see *next page* for details). If the Company distributed profits for 2013 and 2014 on a prorata basis (30% of net profit to all shareholders) additional dividend liability due to minority shareholders would amount to UAH 6m.

1.3.3 Financial Statement Analysis

Kharkivoblenergo

Cash Flow Statement Analysis

Cash Flow Statement

UAHm	FY12	FY13	FY14	9m15
Operating activities				
Sales ¹	4,150	4,373	4,498	3,905
Other proceeds	66	82	90	80
Less cash paid for:				
Goods	(3,204)	(3,525)	(3,718)	(3,085)
Payroll expenses	(399)	(452)	(461)	(360)
Income tax paid	(28)	(38)	(8)	(9)
Other taxes	(208)	(204)	(202)	(162)
Other expenditures	(88)	(91)	(86)	(312)
Net cash flow from operating activities	288	144	112	57
Cash flows from investing activities				
Purchases of property, plant and equipment	(155)	(58)	(62)	(39)
Proceeds from sale of fixed assets	0.4	0.1	-	-
Other proceeds	25	3	1	6
Other payments	(154)	(77)	(33)	(74)
Net cash used in investing activities	(283)	(131)	(94)	(106)
Cash flows from financing activities				
Dividends	(7)	(9)	(6)	(6)
Other payments	-	-	-	(0.1)
Net cash provided by financing activities	(7)	(9)	(6)	(6)
Net cash flow for the reporting period	(3)	4	13	(55)
Balance at beginning of year	68	65	70	83
Balance at the end of the year	65	70	83	28
Sales excluding VAT	3,458	3,644	3,748	3,254
Cash conversion ratio	101.8%	99.7%	94.9%	94.7%

Note: (1) - including VAT

Source: Management information, Deloitte analysis

Cash flow overview

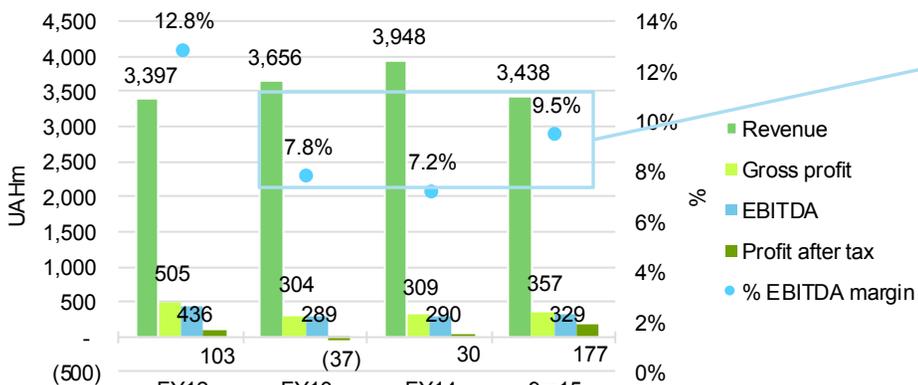
- **Operating activities:** due to the worsening rate of cash collections from certain customers – mainly Kharkivvodokanal – cash collection ratio decreased from 99.7 percent in 2013 to approx. 95 percent in 2014 and 9m15.
- **Investment activities:** The Company uses cash flow received from operating activities to finance its capex. As the company has not utilized any debt capital, capex has been underfunded for years due to limited cash flow from operations. Please see Section 1.3.4 for more detail.
- **Dividends:** According to the resolution of the Cabinet of Ministers of Ukraine №33 on 29 January 2014, joint-stock electric power companies with the state stake of more than 50 percent are obliged to pay dividends of 30 percent of the net profit if the Company has not made a decision on dividends at the first of May of the year following the reporting.
- **Other payments:** As of the date of this report, we have not received information related to the other payments related to operating activity.

1.3.3 Financial Statement Analysis

Kharkivoblenergo

Operating profitability analysis

Revenue and profitability dynamics

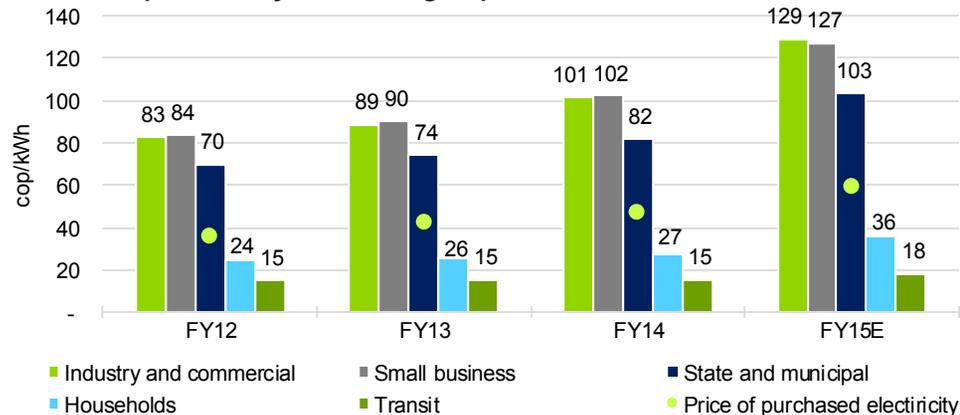


Source: Management information

The decrease in profitability in 2013-2014 was largely due to unbalanced changes in tariffs: Energorynok tariffs grew faster than tariffs for customers.

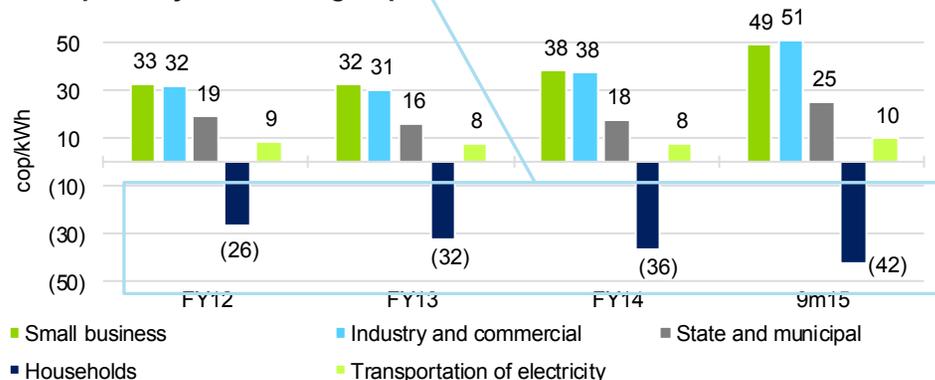
Residential tariffs have historically been highly subsidized and lower than cost

Revenue per kWh by customer group



Source: Management information

Gross profit by consumer group*



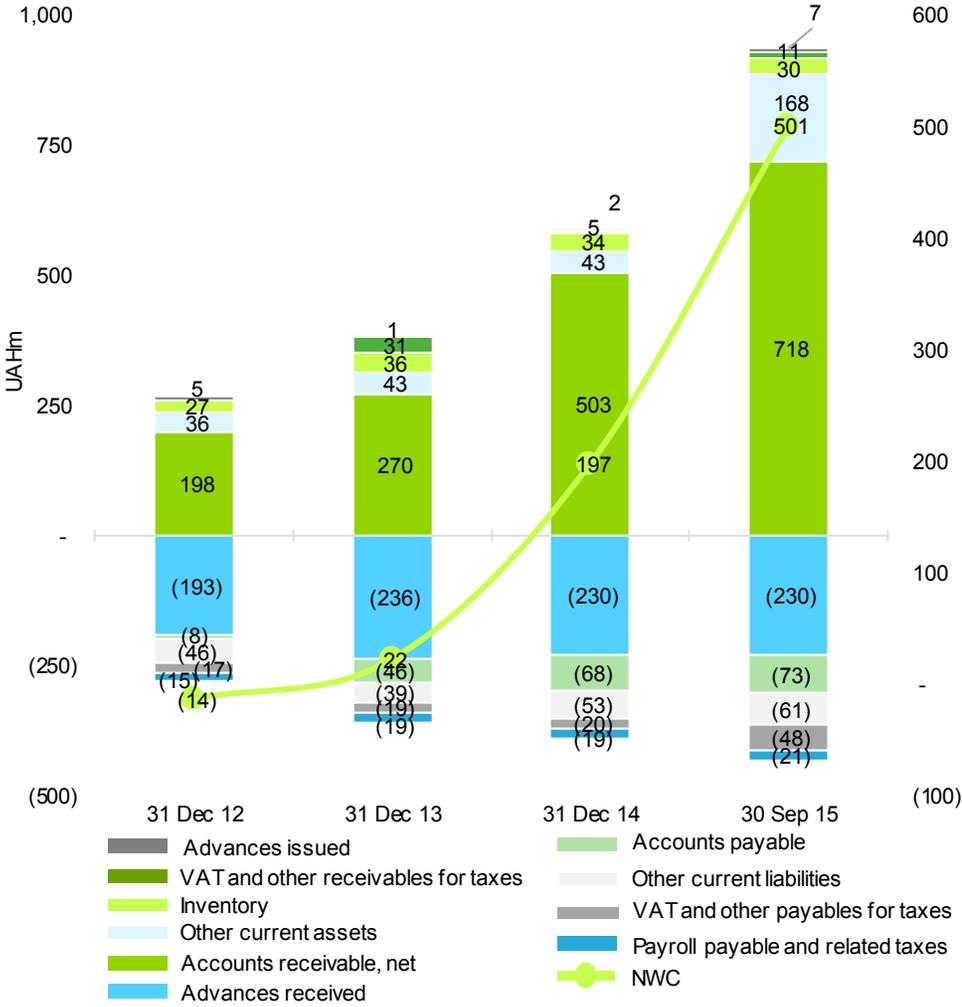
* Gross profit is calculated based on the weighted average cost of purchased electricity
Source: Management information

1.3.3 Financial Statement Analysis

Kharkivoblenergo

Liquidity analysis

Net working capital dynamics



Source: Management information, Deloitte analysis

Working capital analysis

- As illustrated in the chart to the left, receivables have increased significantly, primarily due to delinquent accounts receivable due from Kharkivvodokanal. This has resulted in abnormally increased NWC, and a misleading indication of total asset growth over the past few years.

Normalized net working capital

UAHm	31 Dec 12	31 Dec 13	31 Dec 14	30 Sep 15
NWC before normalizations	(14)	22	197	501
Normalizations				
N 1. Accounts receivable due from Kharkivvodokanal	n/d	(162)	(315)	(486)
Normalized NWC	(14)	(140)	(118)	15

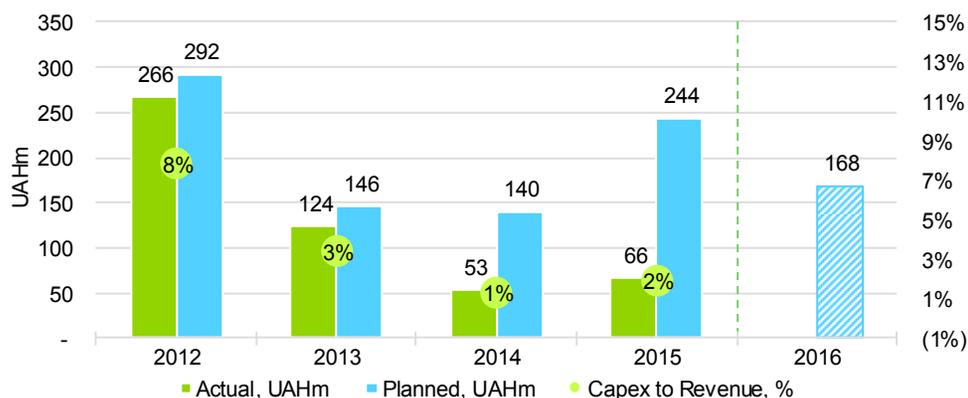
Source: Management information, Deloitte analysis

1.3.4 Capital Expenditures

Kharkivoblenergo

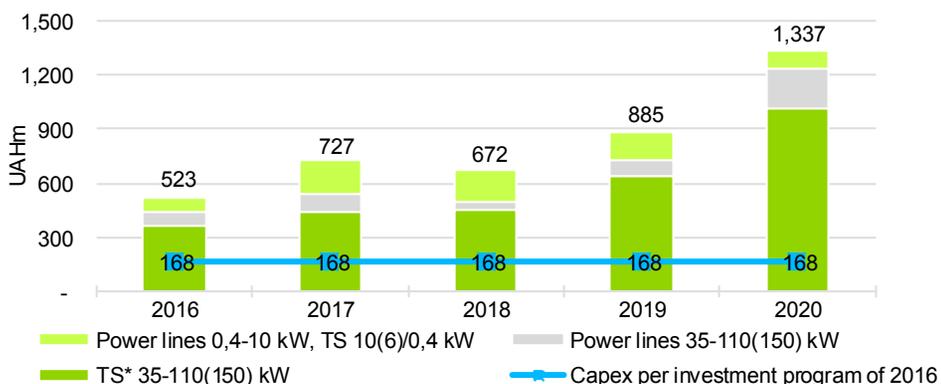
Investment Requirements and Timing of Planned Investments

Capex according to investment program for 2012 - 2016



Source: National Energy and Utilities Regulatory Commission, Management information

Capex needs in prices of 2015



Note: *Transformer substation

Source: Ministry of Energy and Coal Industry of Ukraine

Capital Expenditure Needs

- In 2015, actual spend on capital expenditures did not reach the planned level approved by NEURC –only reaching 27 percent of plan.
- Of the total 66 million spent in 2015, UAH 62m was spent on technical upgrades, modernization and construction of electrical networks and equipment, including:
 - Reconstruction of transmission lines and power distribution stations: UAH 14m (49 percent of the target level)
 - Modernization of transmission lines and power distribution stations : UAH 47m (58 percent of the target level)
- UAH 2.5m (8 percent of the target level) were spent on measures to reduce losses (improvement of electricity metering, etc.).
- UAH 1.6m (35 percent of the target level) were spent on development of information technology.
- UAH 0.1m (8 percent of the target level) were spent on development of communication systems
- UAH 0.1m (3 percent of the target level) were spent on other needs including the construction of office building located at 53 Poltavske Shose St., Pesochyn village, Kharkiv region.
- The 2016 capital expenditure program is primarily intended to:
 - modernize distribution lines, as management believes the Company has enough capacity to serve the existing demand
 - build new cable facilities, as some of the transmission system dates from the 1940s and 1950s;
 - expand consumer metering. Currently around 40 percent of residential customers have automated metering. Of 1.3m household consumers, approx. 0.5m have metering with sufficient precision and protection. All industrial and commercial customers have automated meters capable of being read remotely;
 - Improve billing software and customer service technologies.
- Ministry of Energy and Coal Industry of Ukraine has developed a plan of development of power distribution networks for 2016-2020 for each disco in the context of implementation of the Law of Ukraine "On principles of functioning electricity market of Ukraine". According to this program, total investment needs of the Company are approx. UAH 4.1bn for 2016-2020.

1.3.5 Contract Summary

Kharkivoblenergo

Major suppliers and other third party contracts

	Period	Terms of delivery	Payment	Fines	Other
Contract with Energorynok	Till 31.12.2008, automatically prolonged for each subsequent year if both sides of the contract have not expressed their willingness to terminate the contract a month before the end of it.	Energorynok provides dispatching services and services on transit of electricity by long-distance and interstate electric grid; Actual volume of received electricity at the Oblenergo delivery points is determined based on hourly data of system of commercial accounting.	First part (more than 15% of forecasted (ordered) amount) - till 12am of 1 st day of the month; All other parts more than 15% of forecasted amount - till 6th, 11th, 16th, 21st days of the month; Till 26th Oblenergo has to pay the rest of forecasted amount for the month; In three days after the end of the month Oblenergo has to pay the rest of actual supplies amount for the month; In case of excess of actual amount over forecasted (ordered), Oblenergo has to pay in full in 3 days of every period.	After non-payment in 1 days after the end of "period" - 0.05% from the remaining amount to be paid in 3 days; After non-payment after 20th days of the next month - 0.2% from the remaining amount for every day of overdue (no more than double NBU discount rate); After non-payment for more than 30 days - additional fine 0.1% from the remaining amount; After non-payment in 3 days after the end of "decade" - 0.03% from the remaining amount to be paid in 3 days (valid only if Oblenergo violated payment terms for more than 3 times during LTM).	Message about ordered monthly volume of electricity purchase has to be provided the next day after adoption of the resolution by NEURC; Energorynok has the right to limit electricity supply if Oblenergo does not pay in full or by dates.
Typical contract with Legal entity	For a calendar year, automatically prolonged for each subsequent year if both sides of the contract have not expressed their willingness to terminate or change the contract a month before the end of it.	Volumes are determined for the year till the 1 st October of previous year by Consumer; Consumer has to provide monthly reports about consumed electricity.	Terms are set individually in the attachments to the contract.	Double NBU discount rate for every day of overdue + 3% annual + inflation index; In case of excess over agreed volume of consumption and capacity, double tariff for difference. (if consumer has connected capacity 150kW and more, and consumption volume more than 50,000kWh).	Oblenergo has the right to limit or stop electricity supply (warning 3 days before) if Consumer does not make payment by dates.
Typical contract with Individuals	The contract is signed for the period of 3 years, and is prolonged automatically for 1 year if both sides of the contract have not expressed their willingness to make any changes to the contract a month before the end of it; The contract could be terminated in the case if the consumer change the place of living and stop consuming electricity.	The company is obliged to provide planned audit, maintenance, and repair of meters free of charge; The company is obliged to conduct the checking indications on meters equipment.	Payment are made according to current tariffs and volume of consumed electricity during the period stated in the invoice (or till 10th day of the month); In the case of changing tariffs, the company is obliged to inform the customer no more than 5 days before new tariff implementation; In the case of providing electricity at different technical standards mentioned in the contract, customer can pay 25% of payment.	Are set in the attachments to the contract.	Technical standards of electricity stated in the contract.

Source: Management information, Deloitte analysais

1.4 Preliminary Due Diligence

Mykolaivoblenergo

1.4.1 Business Overview

Mykolaivoblenergo

Location, Facts & Figures on Market Served



Overview

- The Mykolaiv oblast is located in southern Ukraine. Its area – 24,600 km² – comprises approximately 4 percent of the total area of Ukraine. Shipbuilding and activities related to shipbuilding are the main economic drivers in the region.
- The population of Mykolaiv oblast is 1.2m, including 44 percent rural and 56 percent urban.
- 40 percent of the company’s load is residential and 43 percent are commercial and industrial customers.
- Approximately 4,000 employees.

Licenses, authorizations and other permits

- License for supply of electricity at regulated tariffs, originated 9 October 1996 with no expiration.
- License for transmission of electricity by local electric grid, originated 19 September 1996 with no expiration.
- License for construction of buildings and equipment, originated 22 June 2015 for a five year term ending 22 June 2020.

Key dates

1880

A Department of Electrical Engineering of Imperial Russia was established, with offices in Kiev, Odessa, Yekaterinoslav and Nikolayev.

1940

The Southern Energy System was established, which created the first central dispatch administration in the region.

1976

Mykolaiv enterprise of electric networks was established.

1995

The State Enterprise Mykolaivoblenergo was established and separated from the Industrial Energy Association Odesaenergo.

1999

The State Enterprise Mykolaivoblenergo was registered as a state Joint Stock Company Energy supply company "Mykolaivoblenergo". By 2002, 30 percent of shares were sold to private investors.

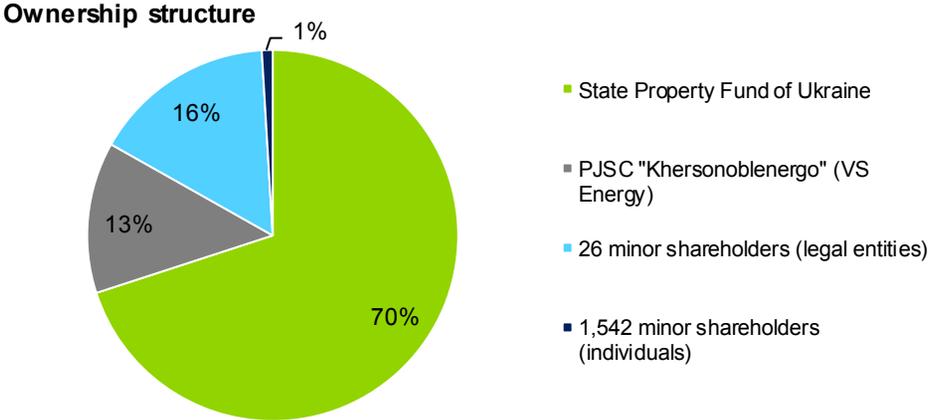
2011

Joint Stock Company Energy supply company "Mykolaivoblenergo" was renamed to the Public Company "Mykolaivoblenergo" at the general meeting of shareholders.

1.4.1 Business Overview

Mykolaivoblenergo

Ownership structure and description of minority shareholders

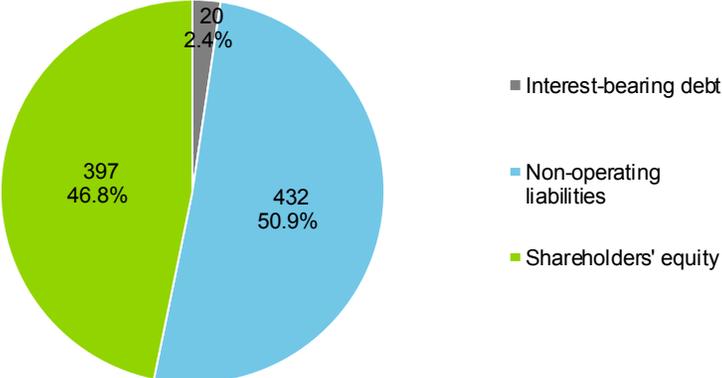


Source: Management information

Minority shareholders

- PJSC Khersonoblenergo has been a minor shareholder since 2009. VS Energy International, an Amsterdam based company connected to Russian businessmen Yevgeny Giner, Alexander Babakov and Mikhail Voevodin, currently holds a 90 percent interest in Khersonoblenergo.
- VS Energy currently holds interests ranging from 13 to 91 percent ownership in ten oblenergos in Ukraine.

Capital structure (book value) as at 30 September 2015, UAHm



Source: Management information, Deloitte analysis

Capital structure (book value)

- As of September 2015, the company held UAH 20m in interest bearing debt, all in short term bank loans, and UAH 7m in cash and cash equivalents.
- In the chart to the left, we've adjusted net debt for the following non-operating liabilities (see Section 1.5.3 for details):
 - UAH 327m in restructured liabilities due to Energorynok,
 - UAH 100m provisions, including UAH 76m provision for fines and penalties,
 - UAH 3m in dividends payable,
 - UAH 2m accounts payable due for construction.

1.4.1 Business Overview

Mykolaivoblenergo

Overview of key assets

Fixed assets as at 31 December 2015

UAHm	Cost	Net book value	Worn-out ratio, %
Transmission equipment	1,001	452	54.9%
Machinery and equipment	560	271	51.5%
Buildings and constructions	214	105	50.8%
Vehicles	44	9	80.2%
Other assets	67	14	79.4%
Total	1,886	851	54.9%

Source: Management information

Power lines by capacity as at 31 December 2014

km	Overhead power lines	Cable power lines
150 kV	1,176	-
110 kV	45	-
35 kV	3,072	13
10 kV	8,109	925
6 kV	169	709
0.4 kV	10,724	542
Total	23,295	2,189

Source: Management information

Power stations number by voltage

	Sub-station	MVA	Transformers
35 kV	192	1,280	278
150 kV	25	970	47
PDS ¹ 6-10/0,4 kV	5,724	1,199	6,041
Total	5,941	3,449	6,366

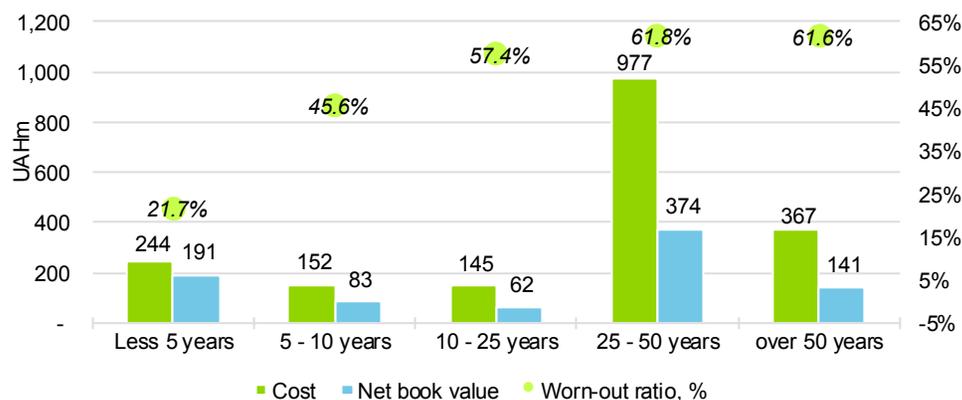
Notes: (1) Power distribution stations

Source: Management information

Fixed assets overview

- Major part of fixed assets, including the largest group – transmission equipment, is 25-50 years old. 19.5% of fixed assets by cost are over 50 years old.
- Fixed assets were 54.9% depreciated as of 31 December 2015.
- Please see details on capex needs analysis in Section 1.3.4.

Fixed assets by age as at 31 December 2015

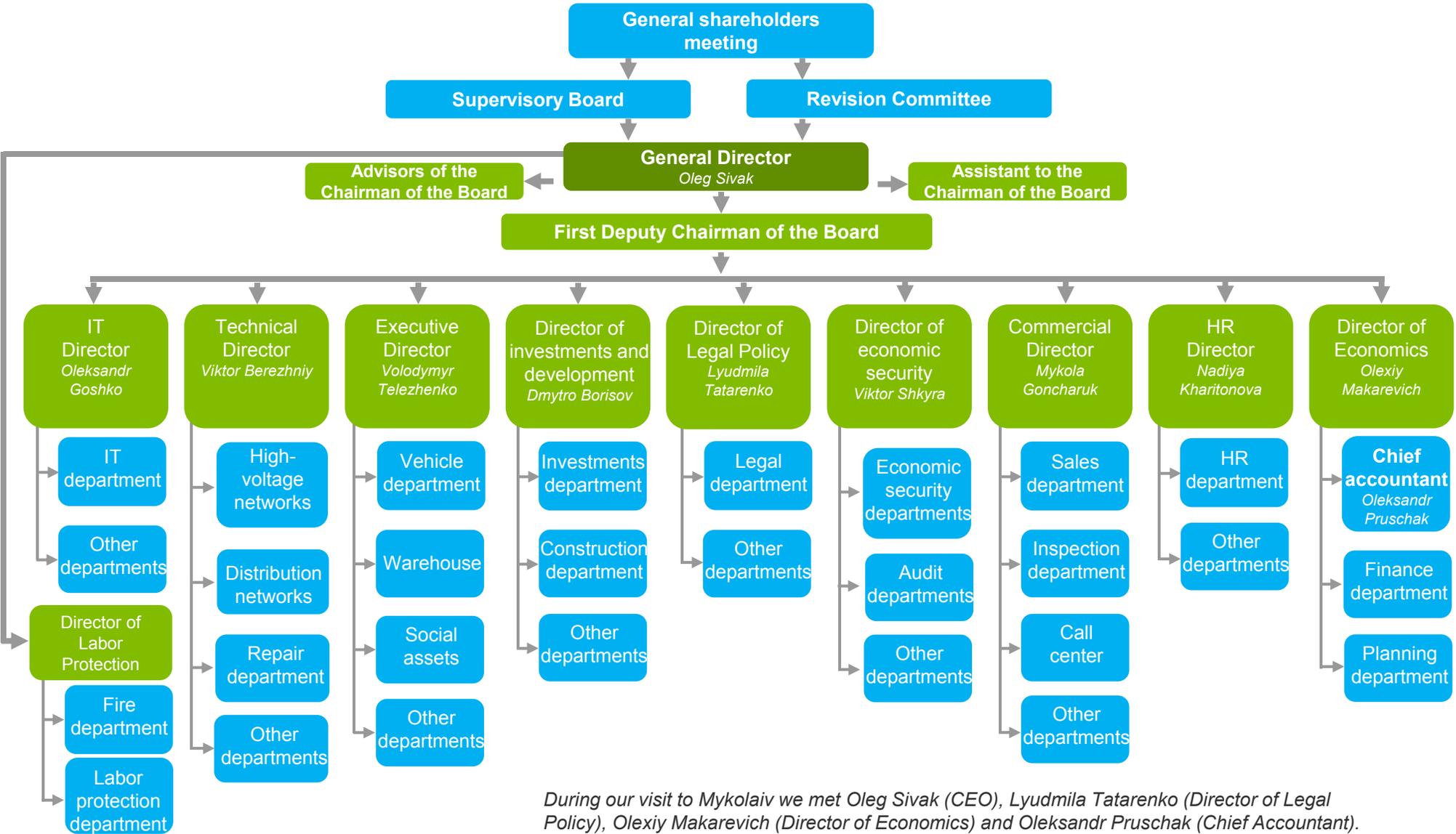


Source: Management information

1.4.1 Business Overview

Mykolaivoblenergo

Management Team and Organization Chart



During our visit to Mykolaiv we met Oleg Sivak (CEO), Lyudmila Tatarenko (Director of Legal Policy), Olexiy Makarevich (Director of Economics) and Oleksandr Pruschak (Chief Accountant).

1.4.2 Operational Characteristics

Mykolaivoblenergo

Customer service, billing, collection capabilities



- Settlements with Energorynok on actual offtake occur 13 times per month on average.
 - In July 2015, the Company did not pay Energorynok in full. As of the end of 2015, the residual current amount outstanding was UAH 7m.
 - Please see summary of the contract with Energorynok details in Section 1.5.5
- Customer base:
 - 39.5 percent residential;
 - 42.9 percent industrial, commercial and agricultural;
 - 11.3 percent municipal and govt.;
 - 6.2 percent transit customers
 - Commercial department is responsible for the sales process.
 - Approx. 80 percent of legal entities prepay for electricity or pay 3 times per month
 - Residential customers pay upon actual usage.
 - Please see summary of the typical contracts with customers in Section 1.5.5
- Supply to customers under the regulated tariff and transit via multiple regional distribution networks, depending on required voltage class.
 - The company is obliged to respond to any supply emergency within 24 hours.
 - Electricity supply from the grid amounted to 2,577 GWh in 2014 and 1,847 GWh in 9m15.
- Retail customers calculate their own bills based on reading their own meter – this is then matched against remote meter reading.
 - Commercial customers bills are based on individual agreements: prepayment, second balance, final balance per month.
 - The Company is obliged by law to have a call center. It is connected to central control center and regional branches.
- Cash collection rate for residential customers is approx. 99 percent. Any delinquent residential customers pay late fees and can be cut off, with an additional fee upon reconnection.
 - Cash Collection rate for commercial customers is close to 100 percent. Majority of commercial customers are on prepayment terms.
 - State and municipal entities have had significant issues with payment. Please see details on bad debts on next page.
 - The company does not have full control over cash received from customers. The company has an account in the state-owned Oshchadbank to which all payments from customers are transferred based on an “algorithm” set by NEURC. This algorithm sets the percentage of cash flows received from customers to the Company and to Energorynok. The rate historically received by the company is close to 100 percent.
 - NEURC can alter the algorithm if the company is delinquent in payments to Energorynok

1.4.2 Operational Characteristics

Mykolaivoblenergo

Aggregate commercial and technical losses, bad debts

Electricity movements in the Mykolaivoblenergo grid

m kWh	FY12	FY13	FY14	9m15
Purchased electricity	2,686	2,628	2,599	1,969
Transportation of electricity	379	364	344	127
Flow of electricity to the grid	3,066	2,991	2,943	2,096
Technical and commercial losses, actual	410	368	359	244
Actual losses, %	13.4%	12.3%	12.2%	11.7%
Normative losses, %	15.7%	15.1%	14.8%	14.6%
Production needs	8	8	7	5
Electricity supply from the grid, total	2,647	2,615	2,577	1,847
Electricity supply to consumers at unregulated tariff	346	328	313	114
Net electricity supply	2,302	2,287	2,264	1,733

Source: Management information

Trade accounts receivable

UAHm	31 Dec 12	31 Dec 13	31 Dec 14	30 Sep 15
Accounts receivable	64	76	102	123
Provision for doubtful debts	(28)	(31)	(54)	(54)
Accounts receivable, net	36	45	48	69
<i>Provision for doubtful debts to total accounts receivable, %</i>	<i>43.8%</i>	<i>41.2%</i>	<i>53.1%</i>	<i>43.7%</i>

Source: Management information

Bad debt allowance policy: 100 percent provision for accounts receivable outstanding over 1 year.

Commercial and technical losses

- Percentage actual losses shown in the table to the left include commercial and technical losses calculated as share of total flow of electricity to the grid. Normative losses are provided by NEURC.
- The level of actual technical and commercial losses decreased from 13.4 percent in 2012 to 11.7 percent for 9 month 2015, which is 2.9 percentage points lower than the normal level of losses for the period.
- Net electricity supply to the customers slightly decreased during 2012-2014 and amounted to 2.6bn kWh.

Bad debts

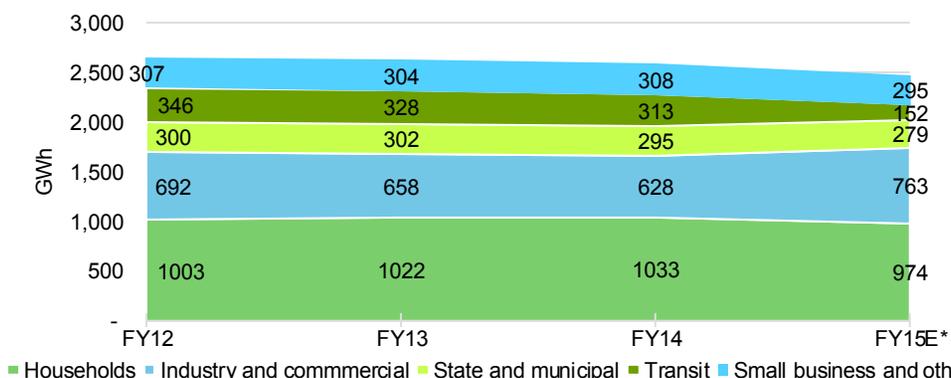
- As of 30 September 2015 UAH 19m accounts receivable were overdue up to 1 year, UAH 21m from 1 to 3 years, UAH 38m more than 3 years. Total bad debt allowance amounted to UAH 54m or 68.9% of the overdue accounts receivable. As of 31 December 2015 bad debt allowance was increased to UAH 64m.
- The top five delinquent accounts as of November 2015 were state-owned and municipal companies, including:
 - SE Shipbuilding, UAH 16m, case is currently in court and customer was partially switched off;
 - PJSC Chornomorskyi Shipbuilding plant, UAH 15m, customer is in bankruptcy, claims are included into creditor register, supplies are limited to the emergency level;
 - Municipal Entity International Airport Mykolaiv, UAH 5m, case is in court;
 - Mykolaivvodokanal, UAH 9m, to be settled by govt. via tariff difference;
 - Gurtozhytok, UAH 6m, case is in court.

1.4.2 Operational Characteristics

Mykolaivoblenergo

Electricity customers served

Sales volume



*Annualized data for 9m15
Source: Management information

Top five clients in 2014 - 9m15

#	Company	2014			9m15		
		GWh	UAHm	% of revenue	GWh	UAHm	% of revenue
1	Yugcement	102	86	6%	74	85	5.6%
2	Zorya-Mashproekt	97	86	6%	71	85	5.6%
3	LLC Sandora	24	26	2%	19	26	1.7%
4	Laktalis - Mykolaiv	12	14	1%	10	14	0.9%
5	Sea port NIKA-TERA	9	10	1%	7	9	0.6%
	Others	2,646	1,284	85%	1,781	1,288	85.5%
	Total	2,890	1,505	100%	1,961	1,507	100.0%

Source: Management information, Deloitte analysis

Customer base

- Households represent a significant share of customers (39.5 percent of total volume in 9m15). Based on discussions with Management, we understand that household consumption has increased since 2012 due to the use of more energy-intensive appliances and consumer electronics, as well high unemployment, which has resulted in a higher portion of the population staying home and consuming more power. In 2015, household consumption is expected to decrease due to increased efficiency following the tariff increase.
- Over the past years consumption of the industrial and other commercial customers has been decreasing due to economic downturn and political turbulence.

Overview of key customers

- In May 2015, the Company gained a significant customer, the Russian-owned Mykolaiv Alumina plant – one of the largest non-ferrous metallurgy enterprises – by transitioning the facility from taking transit services to full supply. The plant consumed 128 GWh during May-September 2015, and respective revenue amounted to UAH 186m.
- Other top customers consumed 180 GWh in 9m15 and represented 9,2 percent of the respective revenue.

1.4.3 Financial Statement Analysis

Mykolaivoblenergo

Income Statement Analysis

Statement of financial performance

UAHm	FY12	FY13	FY14	9m15	Δ ⁺ , %
Revenue	1,326	1,379	1,505	1,507	33.5%
Cost of goods sold	(1,132)	(1,200)	(1,320)	(1,350)	0.4
Gross profit	194	179	185	157	12.7%
Operating expenses & income					<i>n/a</i>
Administrative	(42)	(43)	(48)	(48)	33.7%
Bad debt allowance expense	(9)	(8)	(24)	(0)	(100.0)%
Other operating income	30	33	31	33	45.3%
Other operating expenses	(35)	(112)	(34)	(33)	30.4%
EBITDA	138	49	111	109	31.5%
Normalized EBITDA	138	118	110	108	30.7%
Depreciation	(35)	(75)	(72)	(55)	2.0%
Financial income	-	151	3	-	(100.0)%
Financial expense	(42)	(98)	(27)	(4)	(79.1)%
Other non-operating expenses, net	3	(0.2)	1	0.4	(59.3)%
Income tax	(31)	(9)	(0.2)	(4)	<i>n/a</i>
Profit after tax	32	18	15	46	297.7%
% Gross profit margin	14.6%	13.0%	12.3%	10.4%	
% EBITDA margin	10.4%	3.5%	7.3%	7.2%	
% Normalized EBITDA margin	10.4%	8.5%	7.3%	7.2%	

Note: * - annualized for 9m15 compared to

Source: Management information, Deloitte analysis

EBITDA normalizations

UAHm	FY12	FY13	FY14	9m15
EBITDA	138	48	111	109
N 1. Income on holding housing and social assets	(2)	(0.01)	(0.3)	(1)
N 2. Expenses on holding housing and social assets	3	2	2	3
N 3. Provision for one-off fines and penalties on inspection	-	76	-	-
N 4. Income on sale of non-current and other assets	(1)	(1)	(1)	(1)
N 5. Cost of sold non-current and other assets	0.04	0.2	0.03	0.1
N 6. Income from the current assets previously written off	(1)	(8)	(1)	(2)
N 7. Payments to NJSC Energy Company of Ukraine	1	0.3	-	-
Normalized EBITDA	138	118	110	108

Source: Management information, Deloitte analysis

Deloitte Consulting LLP

Income statement overview

- **Revenue** increased during from 2012 to 2014 by 25 percent due to stable consumption volume and increase in tariffs.
- Salary of administrative personnel constitutes approximately 73 percent of **administrative expenses**, or UAH 35m, during 9m15.
- Bad debt allowance expense is treated as distribution expenses according to the company's accounting policy.
- **Financial income/(expense)**: financial income in the amount of UAH 150m in 2013 was related to the recalculation of fair value of long-term debt due to Energorynok. Financial expense totaling UAH 94m in 2013 and UAH 38m in 2012 was related to the amortization of the discount on long-term debt due to Energorynok.
- **Other operating income** includes UAH 12m income for new connections and fines and penalties totaling UAH 7m for 9m15.
- **Other operating expenses** mainly consist of service costs related to new connections (UAH 11m in 9m15), maintenance of housing and social assets (UAH 3m in 9m15), and fines and penalties (UAH 2m) mainly due to delays with payment to Energorynok. In 2013, the Company provisioned UAH 76m for probable expenses on fines and penalties for inefficient use of gas and other energy resources related to inspection of the State Inspectorate on Energy Saving in 2007.
- **Salary expenses** amounted to approx. UAH 250m in 2015. During 2015, the Company increased basic salary two times (rather than indexation for inflation). Remuneration scheme is the following: basic salary + monthly premium. Monthly premium to administration is fixed (approx. 10 percent), to other employees (regional departments) – head of the department distributes according to the performance, but not less than 50 percent of premium if equally distributed.

Average number of employees and salary by position



Source: Management information

1.4.3 Financial Statement Analysis

Mykolaivoblenergo

Balance Sheet Analysis

Statement of financial position

UAHm	31 Dec 12	31 Dec 13	31 Dec 14	30 Sep 15	Δ, %
Property, plant & equipment, net	858	861	884	886	0.2%
Intangible assets, net	1	1	1	11	n/a
Non-current assets, net	858	862	885	897	1.3%
Inventory	23	28	33	48	46.5%
Accounts receivable, net	36	45	48	69	44.7%
Advances issued	5	2	3	27	n/a
Advances received	(88)	(110)	(136)	(143)	5.5%
Accounts payable	(5)	(43)	(45)	(86)	90.0%
Payroll payable and related taxes	(18)	(19)	(11)	(11)	6.5%
VAT and other payables for taxes, net	(5)	(1)	5	1	(73.1)%
Other current assets	32	37	43	43	0.7%
Other current liabilities	(22)	(4)	(3)	(20)	586.2%
Net working capital	(42)	(65)	(63)	(71)	13.3%
Financial aid provided	-	-	-	28	n/a
Other assets/liabilities, net	3	4	(9)	(9)	5.9%
Total	819	801	814	845	3.8%
Financed by:					
Bank loans	24	6	15	20	33.3%
Cash and cash equivalents	(2)	(5)	(6)	(7)	21.4%
Interest-bearing net debt	22	1	9	13	40.4%
Non-operating liabilities					
Restructured debt due to Energorynok	426	353	348	327	(5.9)%
Provisions	21	95	97	100	3.2%
Dividends payable	0.1	0.1	0.1	3	n/a
Accounts payable due for construction	[n/d]	[n/d]	[n/d]	2	n/a
Adjusted net debt	469	449	454	445	(2.0)%
Deferred tax liability	15	8	3	3	0.0%
Shareholders' equity	335	344	357	397	11.0%
Total	819	801	815	845	3.7%
Net debt / EBITDA	4.1x	11.1x	4.9x	4.9x	
Accounts receivable turnover, days	10	12	12	13	
Accounts payable turnover, days	2	13	12	17	
Current Ratio	0.7	0.7	0.7	0.7	
Quick Ratio	0.5	0.5	0.5	0.6	
Operating Cash Flow Ratio	0.7	0.6	0.5	0.3	

Source: Management information

Balance Sheet overview

- **Fixed assets** mainly consist of machinery and equipment (30 percent) and power lines (15-20 percent). A full revaluation of fixed assets took place in 2003, revaluation of power lines also was conducted in 2008-2009, hydropower plants – in 2012-2013.
- The Company holds 3 **hydropower plants** on the balance sheet, however, according to management, the SPFU canceled the Company's ownership rights. NBV of the hydropower plants is approx. UAH 20m, production is approx. 13 GWh per year which generates UAH 3m revenue. Energy generated was not sold to Energorynok but primarily used for own needs.
- **Non-core assets:** recreation center in Mykolaiv region and approx. 10 residential apartments with UAH 4m NBV as of January 2016.
- **Intangible assets** as of September 2015, mainly consisted of UAH 10m prepayment for market research ("Scheme of the perspective development of the network") to LLC Metropolia. Results to be provided in March 2016.
- **Accounts receivable** balances increased mainly due to increases in tariff rates.
- **Advances issued** were related to repair services due to seasonality: tenders are conducted in January-March; contracts are signed in April, during April-May prepayments are made and works start; major services are closed in autumn-winter.
- **Accounts payable** according to management, as of the end of 2015 decreased to UAH 34m.
- **Financial aid provided:** UAH 28m is remaining part of the non-interest financial aid given to the Holding Company Energomerezha (UAH 16m) and Zaporozhyaoblenergo (UAH 12m).
- **Restructured debt due to Energorynok:** UAH 327m of old debt for supplied energy (originated during 1999-2006) resulted from abnormal losses (actual losses during that period were approx. 50-60 percent, while normal level – approx. 18 percent). According to a number of court decisions, these debts were restructured and will be repaid according to schedule up to 2023.
- **Provisions:** UAH 76m provision was accrued for fines and penalties in 2013 by a court decision related to a 2007 inspection by industry authorities (please see *previous page* for details). UAH 20m provision as of September 2015 was accrued for unused vacation. The Company has 80k days balance of unused vacations or approx. 23 days per each employee.
- **Bank loans:** Until 2014, the state-owned Oshchadbank was the main counterparty, with an open credit limit of UAH 25m. In 2014, the Company switched to mid-sized Bank Vostok. Bank Vostok provides a UAH 18m credit limit at **24 percent per year**.

1.4.3 Financial Statement Analysis

Mykolaivoblenergo

Cash Flow Statement Analysis

Cash Flow Statement

UAHm	FY12	FY13	FY14	9m15
Operating activities				
Sales ¹	1,522	1,573	1,703	1,651
Advances from customers	88	110	136	144
Penalties from debtors	6	6	6	7
Other proceeds	7	5	6	33
Less cash paid for:				
Goods	(1,168)	(1,199)	(1,331)	(1,386)
Advances paid	(5)	(2)	(3)	(27)
Payroll expenses	(213)	(248)	(273)	(221)
Income tax paid	(22)	(21)	(10)	(2)
Other taxes	(94)	(103)	(111)	(76)
Other expenditures	(17)	(20)	(23)	(41)
Net cash flow from operating activities	102	101	100	81
Cash flows from investing activities				
Purchases of property, plant and equipment	(103)	(71)	(104)	(54)
Proceeds from sale of fixed assets	0.06	0.45	0.01	0.02
Other proceeds	-	-	-	11
Other payments	-	-	(1)	(39)
Net cash used in investing activities	(103)	(70)	(105)	(82)
Cash flows from financing activities				
Bank loans	220	246	209	168
Repayment of loans	(207)	(264)	(200)	(163)
Dividends	(15)	(10)	(0)	(3)
Other payments	-	-	(4)	-
Net cash provided by financing activities	(1)	(28)	5	2
Net cash flow for the reporting period	(2)	3	0	1
Balance at beginning of year	4	2	5	6
Balance at the end of the year	2	5	6	7
Sales excluding VAT	1,268	1,311	1,419	1,375
Cash conversion ratio	95.7%	95.1%	94.3%	91.3%

Note: (1) - including VAT

Source: Management information, Deloitte analysis

Cash flow overview

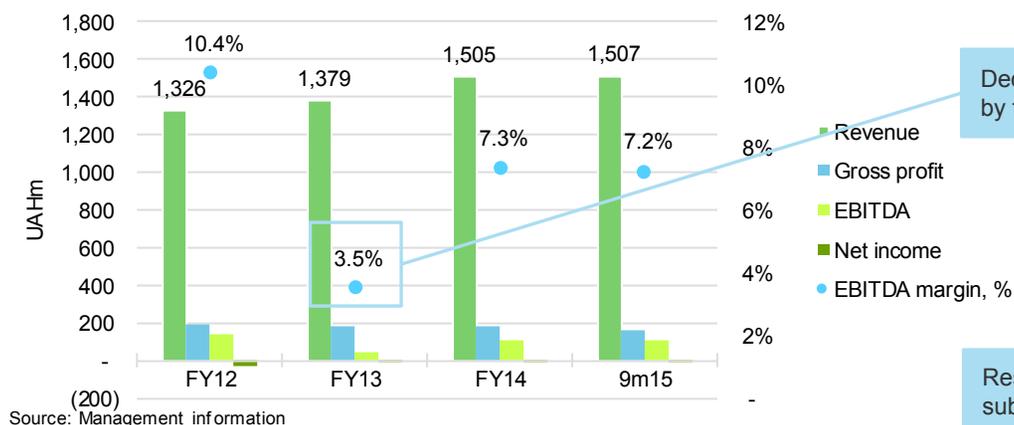
- **Operating activities:** due to the worsening rate of cash collections from certain customers – mainly state-owned and municipal entities - cash collection ratio decreased from 95.7 percent in 2012 to 91.3 percent in 9m15.
- **Investing activities:** The Company uses cash flow received from operating activities to finance its capex. Due to the insufficient cash collected from customers, capex has been underfunded in 2015 due to limited cash flow from operations. Please see Section 1.5.4 for more details on capex.
- **Other payments** within investing activities were transactions on providing financial aid to HC Energomerezha, Zaporozhyaoblenergo and Cherkassyoblenergo.
- **Bank loans:** the Company uses short-term funding from banks for financing liquidity gaps (mainly to support time gap in payments of population). Bank loans were provided by credit line from Oschadbank and Bank Vostok.
- **Dividends:** According to the resolution of the Cabinet of Ministers of Ukraine №33 from 29 January 2014, joint-stock electric power companies with the state stake of more than 50 percent are obliged to pay dividends of 30 percent of the net profit if the Company has not made a decision on dividends at the first of May of the year following the reporting. The Company did not distribute profit in 2014 by the result of 2013, but distributed 30 percent of net profit for 2013 and 2014 at the annual shareholders meeting in 2015.

1.4.3 Financial Statement Analysis

Mykolaivoblenergo

Operating profitability analysis

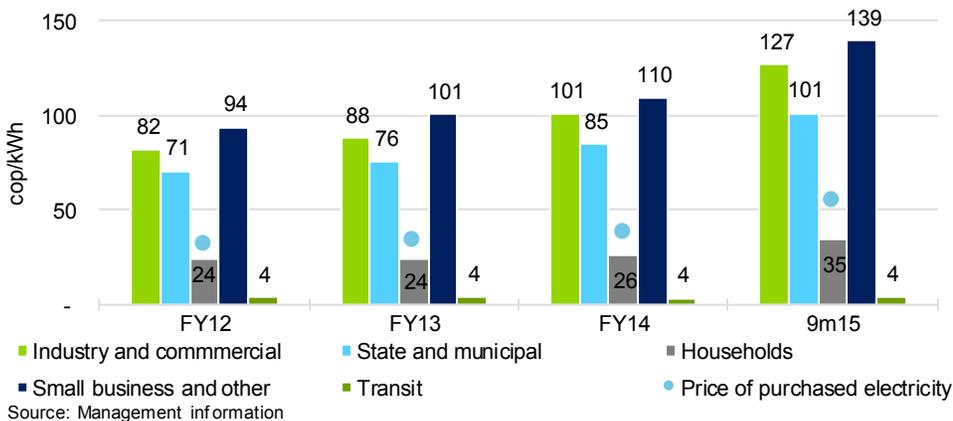
Revenue and profitability dynamics



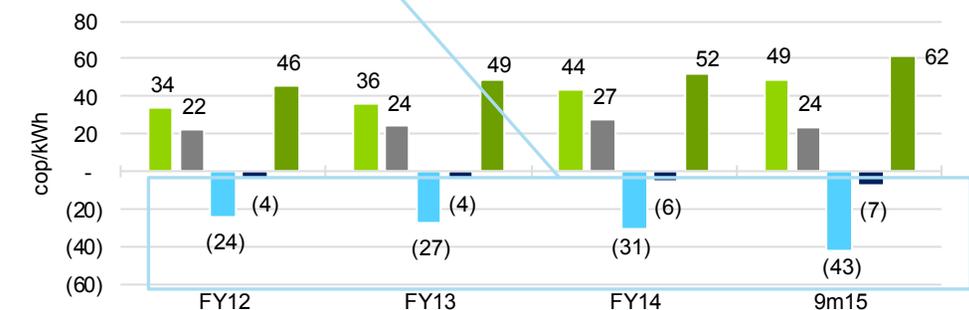
Decrease of EBITDA margin in 2013 was caused by fines and penalties totaling UAH 78m.

Residential tariffs have historically been highly subsidized and lower than cost

Revenue per kWh by consumer group



Gross profit by consumer group*



* Gross profit is calculated based on the weighted average cost of purchased electricity

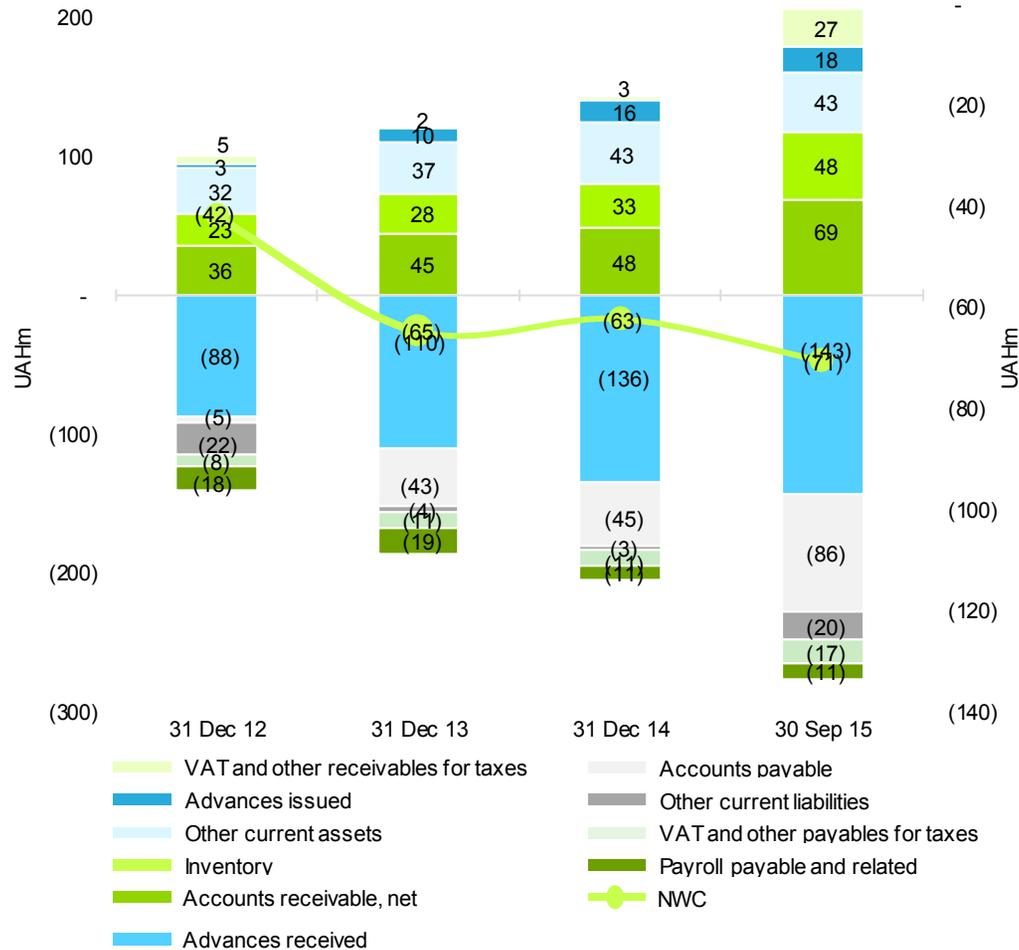
Source: Management information

1.4.3 Financial Statement Analysis

Mykolaivoblenergo

Liquidity analysis

Net working capital dynamics



Source: Management information, Deloitte analysis

Liquidity analysis

- In 2015, several key factors contributed to the change of working capital components as of 30 September 2015 were:
 - Increase in accounts receivable from UAH 48m to UAH 69m and inventory from UAH 33m to UAH 48m mainly due to inflation.
 - Seasonal increase in advances issued for repair services which are usually closed before the year end.
- These factors were partially offset by the increase in accounts payable (mainly due to the remaining balance outstanding due to Energorynok not fully paid in July) and increase in advances received from UAH 143m to UAH 151m.

Normalized net working capital

UAHm	30 Sep 15
NWC before normalizations	(71)
Normalizations	
N 1. Seasonality of the advances issued	(24)
Normalized NWC	(95)

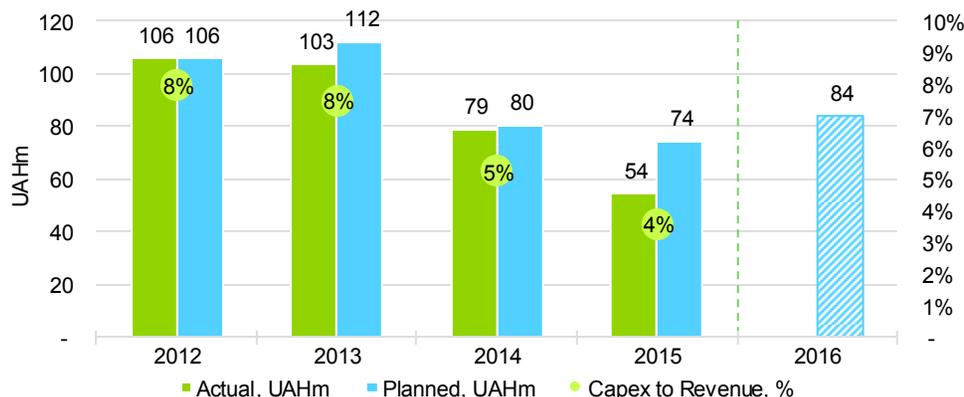
Source: Management information, Deloitte analysis

1.4.4 Capital Expenditures

Mykolaivoblenergo

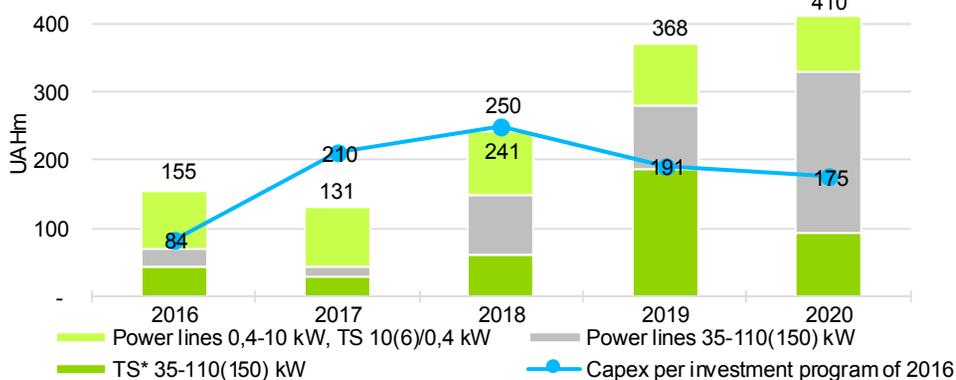
Investment Requirements and Timing of Planned Investments

Capex according to investment program for 2012 - 2016



Source: Management information

Capex needs in prices of 2015



Note: *Transformer substation

Source: Ministry of Energy and Coal Industry of Ukraine, Management information

Capital Expenditure Needs

In 2015, capital expenditures were under plan by UAH 20m (of UAH 74m total planned capex) mainly due to repayment of debt to Energorynok and dividend payments.

- UAH 49.4m (89 percent of the target level) was spent on technical development (upgrades), modernization and construction of electrical networks and equipment.
 - Construction of new power lines: UAH 6.9m (100 percent of the target level).
 - Reconstruction of power lines: UAH 27.2m (77 percent of the target level).
 - Construction of power distribution stations: UAH 2m (53 percent of the target level).
 - Modernization of power distribution stations: UAH 2.2m (100 percent of the target level).
 - Technical re-equipment of power stations: UAH 11m (150 percent of the target level).
- UAH 4.7m (101 percent of the target level) were spent on measures to reduce energy losses (purchase of electric meters and transformers).
- UAH 0.2m (6 percent of the target level) were spent on development of information technology
- UAH 0.03m (2 percent of the target level) were spent on development of communication systems
- According to management, needed capex requirements may reach UAH 400-500m per year during the next five years. This capex is needed mainly for power line replacement and modernization, as only 20 percent of the grid is modern with the rest 30 to 40 years old and older.
- Ministry of Energy and Coal Industry of Ukraine has developed a plan of development of power distribution networks for 2016-2020 for each disco in the context of implementation of the Law of Ukraine "On principles of functioning electricity market of Ukraine". According to this program, total investment needs of the Company are approx. UAH 1.3bn for 2016-2020.

1.4.5 Contract Summary

Mykolaivoblenergo

Major suppliers and other third party contracts

	Period	Terms of delivery	Payment	Fines	Other
Contract with Energorynok	Till 31 Dec 07, automatically prolonged for each subsequent year if both sides of the contract have not expressed their willingness to terminate the contract within 30 days of expiration.	Energorynok provides dispatching services and services on transit of electricity by long-distance and interstate electric grid; Actual volume of received electricity at the Oblenergo delivery points is determined based on hourly data of system of commercial accounting.	1) More than 5% of forecasted (ordered) amount has to be paid till 12am of 1st day and by 3rd day of the month; 2) More than 8% - by 6th, 9th, 10th, 12th, 14th, and 16th day of the month; 3) More than 10% - by 18th, 20th, 23rd, and 25th day of the month; Oblenergo has to pay the rest of actual supplies amount for the month in the day before the last working day of the month; In case of excess of actual amount over forecasted (ordered), Oblenergo has to pay in full in 3 days of every period.	After non-payment in 1 day after the end of "period" - 0.05% from the remaining amount to be paid in 3 days; After non-payment after 20 days of the next month - 0.2% from the remaining amount for every day of overdue (no more than double NBU discount rate) and additional fine 0.1% from the remaining amount; In case of untimely consumption volume providing, a fine of 15x minimum monthly salary has to be paid; In case of providing a wrong consumption volume, 3% of excess of actual volume over forecasted (ordered); In case of excess (over 5%) of actual amount over forecasted (ordered), Oblenergo has to pay a fine of 1% of difference between actual and ordered volume.	Message about ordered monthly volume of electricity purchase has to be provided the next day after adoption of the resolution by NEURC; Energorynok has the right to limit electricity supply if Oblenergo does not pay in full or by dates.
Typical contract with Legal entity	For a calendar year, automatically prolonged for each subsequent year if both sides of the contract have not expressed their willingness to terminate or change the contract within 30 days of expiration.	Volumes are determined for the year till the 15th November of previous year by Consumer; Consumer has to provide monthly reports about consumed electricity.	In the case of providing electricity at different technical standards mentioned in the contract, customer can pay 25% of payment; In the case of cessation of electricity supply because of Company's fault, the Company has to reimburse double costs of not supplied electricity.	Double NBU discount rate for every day of overdue + 3% annual + inflation index; In case of excess over agreed volume of consumption and capacity, double tariff for difference (if consumer has connected capacity 150kW and more, and consumption volume more than 50,000kWh).	Oblenergo has the right to limit or stop electricity supply (warning 3 days before) if Consumer does not make payment by dates; There are limitation of 5 years for legal claims.
Typical contract with Individuals	The contract is signed for the period of 3 years, and is prolonged automatically for 1 year if both sides of the contract have not expressed their willingness to make any changes to the contract; The contract could be terminated in the case if the consumer change the place of living and stop consuming electricity.	The company is obliged to provide planned audit, maintenance, and repair of meters free of charge; The company is obliged to conduct the checking indications on meters equipment.	Payment are made according to current tariffs and volume of consumed electricity during the period stated in the invoice; In the case of changing tariffs, the company is obliged to inform the customer no more than 5 days before new tariff implementation; In the case of providing electricity at different technical standards mentioned in the contract, customer can pay 25% of payment; In the case of cessation of electricity supply because of Company's fault, the Company has to reimburse double costs of not supplied electricity.	In the case of payment delay, customer is obliged to pay penalties according to current legislation.	Technical standards of electricity stated in the contract.

Source: Management information, Deloitte analysis

1.5 Preliminary Due Diligence

Zaporozhyaoblenergo

1.5.1 Business Overview

Zaporozhyaoblenergo

Location, Facts & Figures on Market Served



Overview

- Zaporozhyaoblenergo is the third largest distribution company in Ukraine, after Dniπροoblenergo and Kyivenergo.
- The company covers 27.2k sq. km territory where serves 760,000 residential and 23,000 commercial and industrial customers, employs over 5,700 staff.
- Zaporozhya is one of the largest industrial region with population of 1.8m.

Licenses, authorizations and other permits

- License for supply of electricity at regulated tariffs, date 23 May 2005.
- License for transmission of electricity by local networks, dated 23 May 2005.
- License for construction of certain buildings and equipment originated 30 August 2011 for a five year term ending 30 August 2016.
- 1 Permit for special water use.
- 56 permits for pollutant emissions by stationary sources (related to maintenance services, welding, etc.).
- Permits to operate high risk equipment.
- Permit for operating of radio electronic equipment.

Key dates

July 1995

In accordance to the Decree of the President of Ukraine, established through the separation from Energy Association Dniπροenergo.

October 1996

The State Property Fund of Ukraine made a decision on the privatization of State joint-stock power supply company Zaporozhyaoblenergo.

1998-2000

SPFU sold 40 percent of Zaporozhyaoblenergo shares via stock exchanges and auctions.

April 2000

State Joint Stock Power Supply Company Zaporozhyaoblenergo renamed to Joint Stock Company Zaporozhyaoblenergo by the decision of the general meeting of shareholders.

April 2004

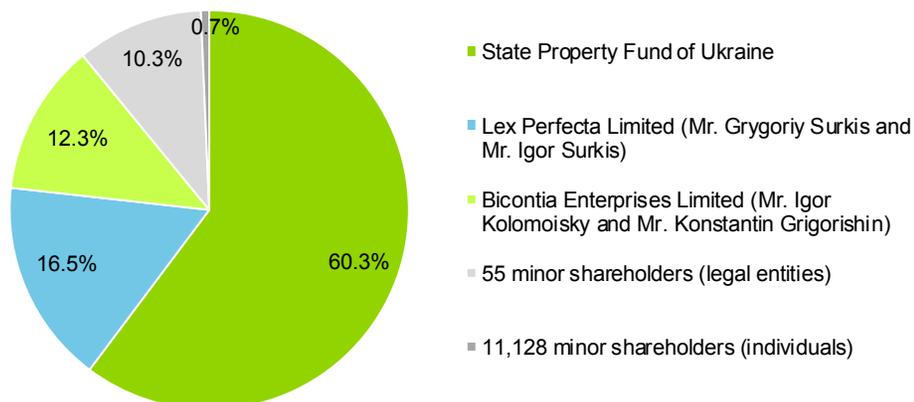
A new organizational structure was implemented by a decision of the general meeting of shareholders.

1.5.1 Business Overview

Zaporozhyaoblenergo

Ownership structure and description of minority shareholders

Ownership structure

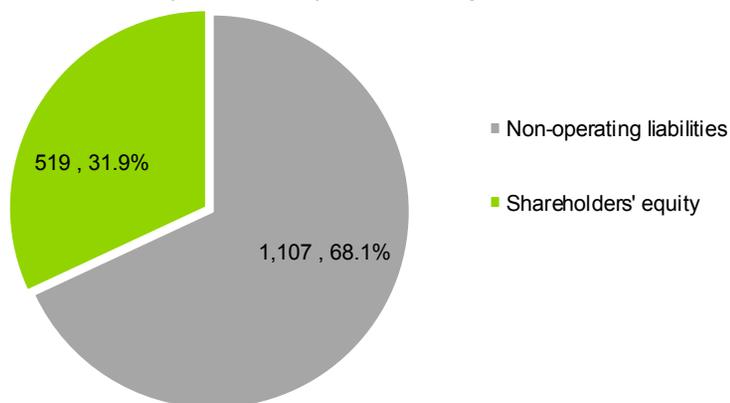


Source: Management information

Minority shareholders

- Minority shareholders include the following persons:
 - I. Kolomoisky is the owner of the company's largest customer, Zaporozhya Ferroalloy Plant, and one of the largest Ukrainian financial-industrial group Privat Group. Privat Group currently holds interests ranging from 5 to 49 percent ownership in five oblenergos in Ukraine.
 - Grygoriy and Igor Surkis have stakes in Lvivoblenergo (89%), Prykarpattayoblenergo (88%) and many other assets.
 - As the top shareholder of Energy Standard Group ("ESG"), Mr. Grigorishin – a Russian citizen – is one of the largest players on the Ukrainian energy industry. Through his investment vehicles, Mr. Grigorishin currently holds interests ranging from 6 to 100 percent ownership in 11 oblenergos in Ukraine. In addition, he is the owner of Zaporozhyatransformator – the largest supplier of substations in Ukraine.

Capital structure (book value) as at 30 September 2015, UAHm



Source: Management information

Capital structure (Book Value)

- As of September 2015, the company held UAH 18m cash and cash equivalents without any interest bearing debt.
- In the chart to the left, non-operating liabilities are represented by the following (see Section 1.3.3 for details):
 - UAH 1,032m in restructured liabilities due to Energorynok,
 - UAH 68m financial aid,
 - UAH 7m other liabilities,
 - UAH 1m in dividends payable

1.5.1 Business Overview

Zaporozhyaoblenergo

Key assets

Fixed assets as at 30 September 2015

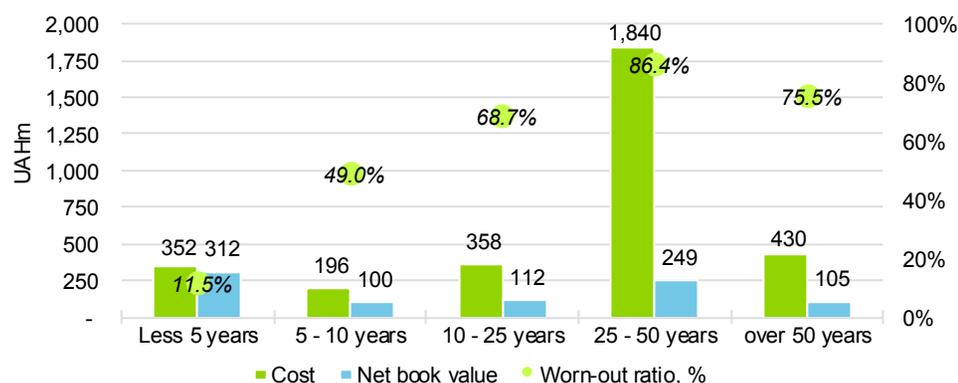
UAHm	Cost	Net book value	Worn-out ratio, %
Buildings and constructions	2,627	660	74.9%
Machinery and equipment	426	174	59.1%
Other assets	105	33	68.6%
Total	3,158	867	72.6%

Source: Management information

Key assets overview

- 76 percent or UAH 660m of fixed assets as of 30 September 2015 is represented by buildings (incl. power transmission lines), which are depreciated by 75 percent.
- 36,782 km of power lines are overhead and 2,880 km – cable.
- NBV of machinery and equipment comprised UAH 174m with 59 percent worn-out ratio as of 30 September 2015.
- Per management average age of power station is more than 25 years, while age of overhead power lines exceeds 35 years.
- Please refer to Section 1.3.4 for details on Investment Requirements of the company.

Cost & net book value of fixed assets by age



Source: Management information

Power stations number by voltage

	Number	MVA
110/150kV	50	5,431
35 kV	216	1,711
6-10 kV	8,276	2,029
Total	8,542	9,171

Source: Management information

Power lines by capacity as at 31 December 2014

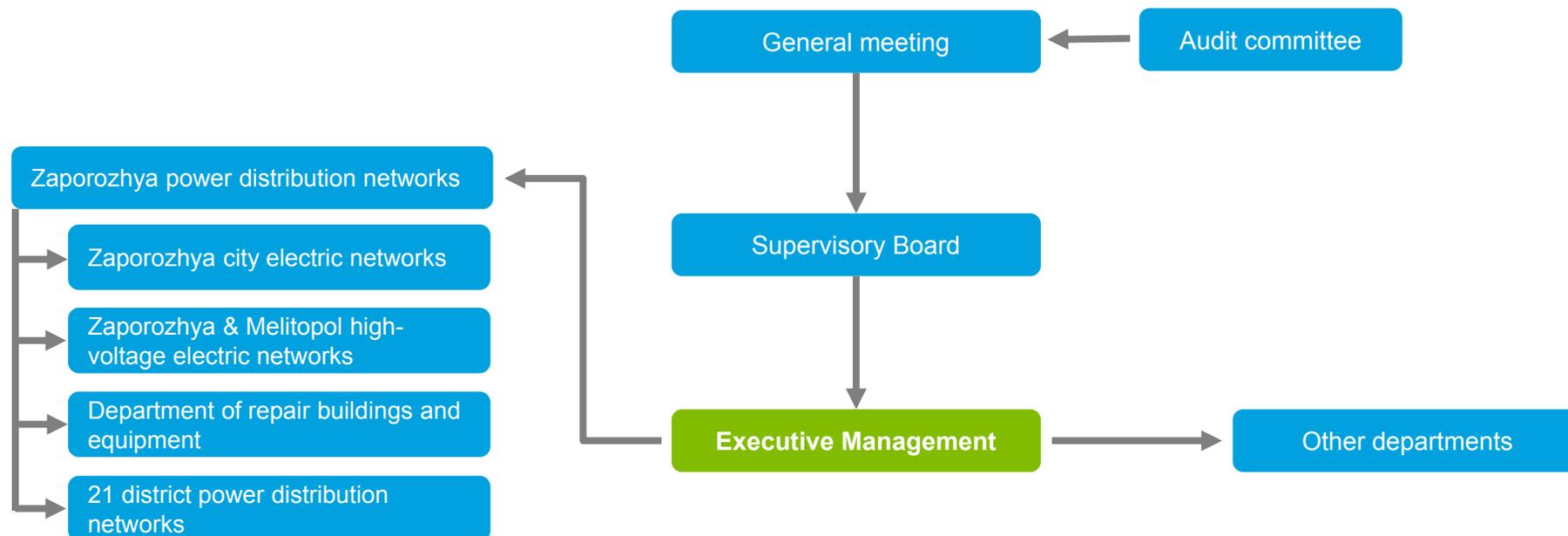
km	Overhead power lines	Cable power lines
154 kV	2,236	-
110 kV	43	-
35 kV	4,353	21
10 kV	11,806	425
6 kV	897	1,193
0.5 kV	17,446	1,240
Total	36,782	2,880

Source: Management information

1.5.1 Business Overview

Zaporozhyaoblenergo

Management Team and Organization Chart



Management team

Iryna
Maga
-
Chief
Accountant

Viktor
Pilipenko
-
Director of
information
technology
and control
systems

Maxim
Ovchinnikov
-
Legal Director

Roman
Draniy
-
Acting
Director of
Sales

Igor
Kornilenkov
-
Acting
General
Director

Evgen
Trukhachev
-
Deputy of
General
Director

Oleg
Lysenko
-
Technical
Director

Sergiy
Davidenko
-
Director of
sustainable
growth and
investments

Sergiy
Kladko
-
Director of
economic
security

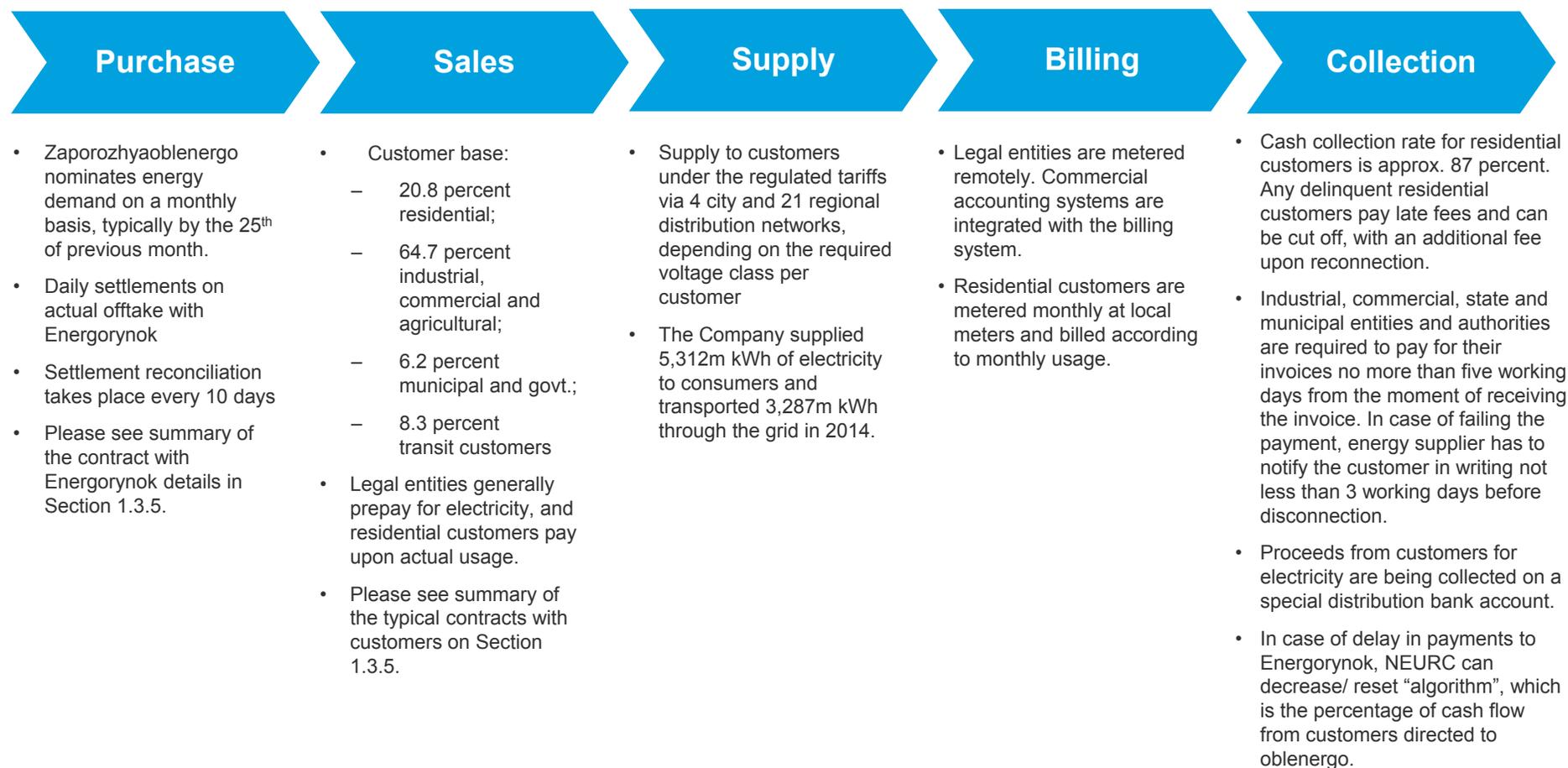
Larisa
Shvets
-
Director on
economic
issues

During our visit to Zaporozhya we met I. Kornilenkov (Acting General Director); R. Draniy (Acting Director of Energosbyt); V. Vlasov (Deputy Technical Director); L. Shvets (Director on economics and finance); I. Maga (Chief Accountant); V. Pilipenko (Director of information technology and control systems)

1.5.2 Operational Characteristics

Zaporozhyaoblenergo

Customer service, billing, collection capabilities



1.5.2 Operational Characteristics

Zaporozhyaoblenergo

Aggregate commercial and technical losses, bad debts

Electricity movements in the Zaporizhoblenergo grid

m kWh	FY12	FY13	FY14	9m15
Purchased electricity	8,955	7,426	5,972	6,370
Transportation of electricity	268	1,710	3,287	286
Flow of electricity to the grid	9,223	9,137	9,259	6,656
Technical and commercial losses, actual	876	819	770	486
Actual losses, %	9.5%	9.0%	8.3%	7.3%
Normative losses, %	9.5%	9.0%	8.3%	8.0%
Production needs	20	19	18	11
Electricity supply from the grid, total	8,327	8,298	8,472	6,159
Net electricity supply	8,081	6,646	5,312	5,893

Source: Management information

Aging of accounts receivable

UAHm	31 Dec 12	31 Dec 13	31 Dec 14	30 Sep 15
<12 months	259	237	412	970
12 to 18 months	31	20	31	17
from 18 to 36 months	280	187	50	64
over 36 months	114	216	125	141
Bad debt provision	(256)	(252)	(155)	(190)
Total	428	408	463	1,002
Provision for doubtful debts to total accounts receivable, %	37%	38%	25%	16%

Source: Management information

Commercial and technical losses

- The percentage of actual losses includes commercial and technical losses during the period as the share in total flow of electricity to the grid. Normative loss rates are provided by NEURC.
- Level of actual technical and commercial losses decreased from 9.5 percent in 2012 to 7.3 percent for 9 month 2015, which is 0.7 p.p. less than normative level of losses for the period.

Bad debts

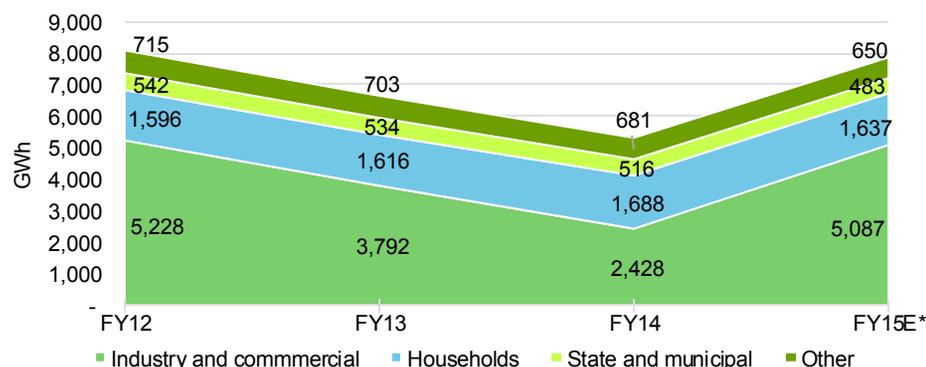
- Accounts receivable increased significantly over 9m15, due to the non-payment of major industrial entities:
 - Zaporozhya Ferroalloy Plant increase in receivables by UAH 435m during the period
 - Zaporizhstal increased by UAH 56m to total of UAH 104m
 - Titanium and magnesium plant increased by UAH 45m to total of UAH 126m
 - Vodokanal total amount outstanding of UAH 34m
- Per management, these entities can not be disconnected for non-payment due to certain ecological requirements in government regulations and/or according to the water law.
- As of February 2016, accounts receivable due from Zaporozhya Ferroalloy Plant amounted to UAH 301m and are expected to be repaid in March 2016 according to payment schedule agreed with the debtor. Accounts receivable due to Titanium and magnesium plant reached UAH 193m as of 15 February 2016. Per management, companies agreed repayment schedule maturing in October 2016. Zaporizhstal decreased its obligations to UAH 64m.
- As of 30 September 2015 UAH 970m accounts receivable were aged up to 1 year and UAH 222m by more than 1 year ago, while allowance for doubtful debts amounted to UAH 190m.
- According to the accounting policy allowance for accounts receivable is created by the Company in case of court decision on disputed amounts, bankruptcy or debtor liquidation.

1.5.2 Operational Characteristics

Zaporozhyaoblenergo

Electricity customers served

Sales volume



Note: *Annualized data for 9m15
Source: Management information

Top 5 clients in 2014 - 9m15

#	Company	2014			9m15		
		GWh	UAHm	% of revenue	GWh	UAHm	% of revenue
1	Zaporizhya ferroalloy plant	0.3	0.4	0.0%	1,331	1,814	29.9%
2	Zaporizhstal	215	263	6.5%	886	1,271	20.9%
3	Dniprospeksstal	436	465	11.4%	313	443	7.3%
4	Titanium and magnesium plant	339	383	9.4%	264	388	6.4%
5	Zaporizhzhya abrasive plant	225	225	5.5%	163	218	3.6%
	Others	4,097	2,731	67.1%	2,937	1,942	32.0%
	Total	5,312	4,070	100%	5,893	6,075	100.0%

Source: Management information, Deloitte analysis

Customer base

- Zaporozhyaoblenergo's revenues are highly concentrated. The share of three largest industrial consumers – Zaporozhya Ferroalloy Plant, Zaporizhstal and Dniprospeksstal – reaches 58.1 percent of total revenue generated during 9m15.
- Industrial and commercial entities represent the largest group of customers, which consumed 64.7 percent of electricity supplied by Zaporozhyaoblenergo over 9 month 2015. The share of households' consumption equaled to 20.8 percent and state, municipal and other consumers – 14.4 percent.
- Served consumption of industrial and other commercial customers has been decreasing due to switching of customers from Zaporozhyaoblenergo to direct supplies from Energorynok and to suppliers offering electricity at unregulated tariff.
- Twofold growth of consumption by industrial entities during 9 month 2015 is explained by the refusal of Energorynok to work directly with such counterparties as Zaporozhya Ferroalloy Plant (+1.3b kWh for 9 month 2015) and Zaporizhstal (+0.7b kWh) and their switch back to the Company.
- Consumption of electricity by households demonstrated stable growth during 2012-2014 with 2.8 percent CAGR.

1.5.3 Financial Statement Analysis

Zaporozhyaoblenergo

Income Statement Analysis

Statement of financial performance

UAHm	FY12	FY13	FY14	9m15	$\Delta^1, \%$
Revenue	5,444	4,747	4,070	6,075	99.1%
Cost of goods sold	(5,252)	(4,575)	(3,951)	(5,788)	95.3%
Gross profit	192	172	118	288	224.3%
Operating expenses					
Administrative expenses	(33)	(32)	(34)	(24)	(5.4%)
Other operating income	116	67	209	53	(66.0%)
Other operating expenses	(246)	(53)	(107)	(82)	1.9%
EBITDA	29	154	185	235	68.9%
Normalized EBITDA	236	166	63	255	440.1%
Depreciation	(85)	(96)	(111)	(59)	(28.6%)
Financial income	105	24	2	10	n/a
Financial expense	-	(49)	(107)	(36)	(55.2%)
Income tax	(17)	(8)	37	-	(100.0%)
Profit after tax	30	25	6	150	n/a
% Gross profit margin	3.5%	3.6%	2.9%	4.7%	
% EBITDA margin	0.5%	3.2%	4.6%	3.9%	
% Normalized EBITDA margin	4.3%	3.5%	1.5%	4.2%	

Note: [1] annualized for 9m15

Source: Management information, Deloitte analysis

EBITDA normalizations

UAHm	FY12	FY13	FY14	9m15
EBITDA	29	154	185	235
N 1. One-off recovery of previously written off doubtful debts	-	-	(163)	-
N 2. One-off write-off of accounts payable	38	12	-	-
N 3. Reclass of non-operating (income)/expenses	(14)	(0)	(3)	(2)
N 4. One-off accrual of reserve for doubtful debts	163	-	44	-
N 5. Fines and penalties regarding restructuring of debt due to Energorynok	21	-	-	22
Normalized EBITDA	236	166	63	255

Source: Management information, Deloitte analysis

Income statement overview

- **Revenue** decreased from 2012 to 2014 by 25.2 percent, mainly due to the switching of Zaporozhya Ferroalloy Plant and Zaporizhstal to direct supplies from Energorynok.
- Transit revenue decreased from UAH 57m for 2014 (UAH 46m for 9m14) to UAH 15m for 9m15 as a result of switch of industrial back to the Company.
- 94.2 percent of **cost of goods sold** during 9m15 totaling UAH 5,454m is represented by cost of purchased electricity mostly from Energorynok. Salary of production personnel equaled to 4.8 percent of cost of sales or UAH 278m during 9m15. Growth in salary costs from UAH 333m in 2012 to UAH 367m in 2014 was mainly explained by increase in average monthly salary from UAH 3.9k in 2012 to UAH 4.4k in 2014
- Salary of administrative personnel constitutes about 90 percent of **administrative expenses** or UAH 22m during 9m15.
- **Other operating income** is represented by fines and penalties charged for non-payment totaling UAH 30m and UAH 7m income for customers connection fee for 9m15. Boosted other operating income in 2014 is mainly explained by recovery of previously written-off accounts receivable due to the sale of receivables to Energomerezha. Please refer to the next page for more details.
- **Other operating expenses** mainly consist of doubtful debts provision (UAH 36m in 9m15) and fines and penalties (UAH 22m) mainly due to delay with payment to Energorynok.
- **Financial expenses** relate to discounting of long-term restructured debt due to Energorynok.

1.5.3 Financial Statement Analysis

Zaporozhyaoblenergo

Balance Sheet Analysis

Statement of financial position

UAHm	31 Dec 12	31 Dec 13	31 Dec 14	30 Sep 15	Δ, %
Property, plant & equipment, net	749	790	773	867	12.2%
Intangible and other assets	3	4	5	5	6.7%
CIP	75	166	215	79	(63.5)%
Non-current assets, net	827	960	992	950	(4.3)%
Inventory	65	47	37	32	(13.0)%
Accounts receivable, net	428	408	463	1,002	116.3%
Advances issued	1	2	1	5	318.2%
Advances received	(60)	(92)	(103)	(166)	60.8%
Accounts payable	(154)	(60)	(375)	(624)	66.5%
Payroll payable and related taxes	(19)	(18)	(19)	(18)	(7.4)%
VAT and other payables for taxes, net	7	9	6	(50)	n/a
Other current assets	51	16	16	46	192.3%
Other current liabilities	(26)	(92)	(38)	(37)	(3.1)%
Net working capital	293	220	(12)	190	n/a
Assignments of receivables to Energomerezha	-	-	196	496	153.5%
Other assets	0.2	0.1	-	-	n/a
Other assets/liabilities, net	0	0	196	496	153.5%
Total	1,120	1,180	1,176	1,636	39.1%
Financed by:					
Bank loans	-	-	6	-	(100.0)%
Cash and cash equivalents	(40)	(37)	(17)	(18)	7.1%
Interest-bearing net cash	(40)	(37)	(11)	(18)	58.8%
Non-operating liabilities					
Restructured debt due to Energorynok	770	803	778	1,032	32.5%
Financial aid	-	-	-	68	n/a
Dividends payable	2	1	1	1	0.0%
Other liabilities	3	9	10	7	(30.5)%
Net debt	735	776	778	1,089	40.1%
Deferred tax liability	59	61	28	28	0.0%
Shareholders' equity	327	343	371	519	40.0%
Total	1,120	1,180	1,176	1,636	39.1%
Net debt / EBITDA	25.7x	5.1x	4.2x	6.2x	
Net Debt to Equity Ratio	2.2	2.3	2.1	2.1	
Current Ratio	2.1	1.8	1.0	1.2	
Quick Ratio	1.9	1.6	0.9	1.2	

Source: Management information, Deloitte analysis
Deloitte Consulting LLP

Balance Sheet overview

- **Fixed assets:** approx. UAH 660m (or 76 percent) are buildings and power transmission lines which are depreciated by 75 percent, UAH 174m (or 20 percent) – machines and equipment which are depreciated by 60 percent. Fixed assets were last independently valued in 2010 for IFRS financial statements, except of transport vehicles which were valued last in December 2014 by local valuation company.
- **Accounts receivable** increased significantly during 9m15 mainly due to the non-payment of the large industrial consumers. We recommend to assess the recoverability of receivables due from Zaporozhya Ferroalloy Plant and recognize respective bad debts provision.
- **Accounts payable** due to Energorynok increased from UAH 359m as of December 2014 to UAH 590m as of September 2015. Overdue debt due to Energorynok was restructured for the period till 2022 and amounted to 1,032m as of September 2015.
- **Assignment of receivables due from Energomerezha:** In late 2014 and at the beginning of 2015 the company sold UAH 0.8b of overdue accounts receivables due from Dnipropetsstal and Zaporozhya Titanium & Magnesium Combine to unknown Energomerezha par value maturing in 2018. National anticorruption bureau launched an investigation into that matter. Based on discussions with Management, we understand that Energomerezha pays less than stated in the repayment schedule. As of 15 February 2016, outstanding amounts due from Energomerezha equaled UAH 489m. We recommend to assess the possibility of termination of the assignment contract or recognize provision for bad and doubtful debts.
- **Bank loans:** overdraft with credit limit of UAH 30m and maturity date of 25 June 2015 was provided by Ukgazbank. The outstanding amount of UAH 6m as of 31 December 2014 was repaid in 2015.
- **Quasi-debt items** are represented by UAH 33m of legal claims and UAH 4m of potential claims from minority shareholders due to UAH 6m withdrawals by the majority owner – the Government in 2014-2015 without the approval of shareholder meeting.

1.5.3 Financial Statement Analysis

Zaporozhyaoblenergo

Cash Flow Statement Analysis

Cash Flow Statement

UAHm	FY12	FY13	FY14	9m15
Operating activities				
Sales ¹	6,153	5,657	4,625	6,328
Advances from customers	-	79	94	164
Other proceeds	383	101	57	141
Less cash paid for:				
Goods	(5,792)	(5,030)	(4,002)	(6,145)
Payroll expenses	(334)	(350)	(377)	(284)
Other expenditures	(90)	(75)	(184)	(66)
Income tax paid	(10)	(8)	(3)	(1)
Tax and fees	(128)	(121)	(136)	(114)
Net cash flow from operating activities	182	252	74	21
Investment activities				
Purchases of property, plant and equipment	(143)	(210)	(89)	(14)
Proceeds from sale of fixed assets	37	1	0.2	0.0
Other proceeds	2	-	-	4
Other payments	(36)	(35)	(6)	(3)
Net cash used in investing activities	(140)	(245)	(95)	(13)
Financing activities				
Bank loans	241	162	81	-
Repayment of loans	(241)	(162)	(75)	(5)
Dividends	(5)	(10)	(5)	(1)
Other payments	-	(0.0)	(0.2)	-
Net cash provided by financing activities	(5)	(10)	1	(7)
Net cash flow for the reporting period	37	(3)	(20)	1
Balance at beginning of year	3	40	37	17
Balance at the end of the year	40	37	17	18
Sales excluding VAT	5,127	4,714	3,854	5,273
Cash conversion ratio	94%	99%	95%	87%

Note: (1) - including VAT

Source: Management information, Deloitte analysis

Cash flow overview

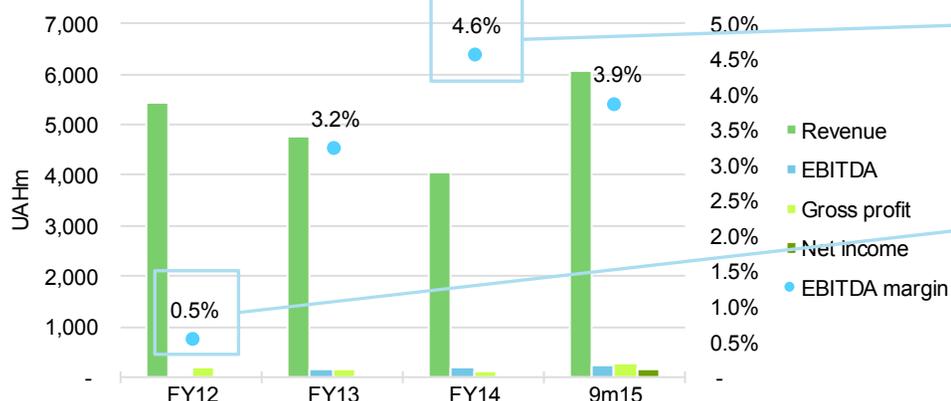
- **Operating activities:** Cash conversion ratio decreased from 95 percent in 2014 to 87 percent for 9m15, primarily due to non-payment for consumed electricity from Zaporozhya Ferroalloy Plant.
- **Investment activities:** As a result of bad payment discipline of large industrial consumers, the zero algorithm was applied during 5 months of 2015, which disabled the Company from funding its 2015 investment program.
- **Bank loans:** the Company uses short-term debt facilities from banks to cover liquidity gaps. Bank financing was provided in the form of credit lines during 2012-2014 and overdraft in 2014 from Prominvestbank, Sberbank Russia, TAScombank, KB Globus, Zlatobank, and Ukrgazbank.
- **Dividends:** Per management, historically the Company paid approx.30 percent of net profit as dividends. According to the resolution of the Cabinet of Ministers of Ukraine №33 from 29 January 2014, joint-stock electric power companies with the state stake of more than 50 percent are obliged to pay dividends of 30 percent of the net profit if the Company has not made a decision on dividends until May 1 of the year following the reporting. In accordance with the resolution the Company paid UAH 4.5m to the government in 2014 and UAH 1.2m in 2015.

1.5.3 Financial Statement Analysis

Zaporozhyaoblenergo

Operating profitability analysis

Revenue and profitability dynamics



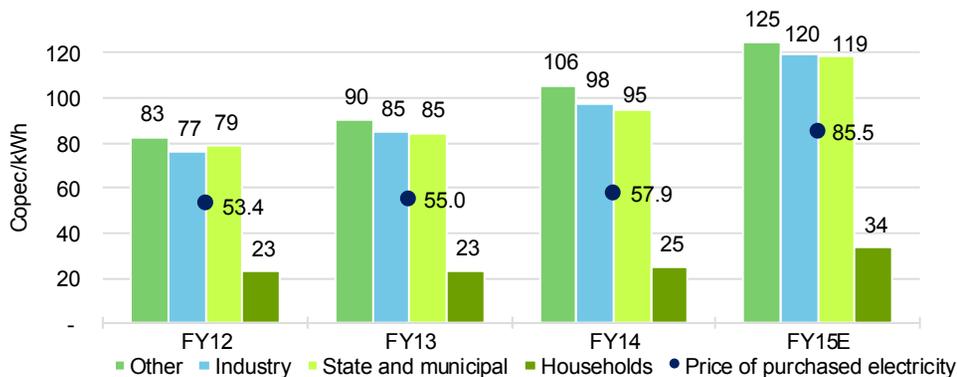
Source: Management information

EBITDA margin increased in 2014 due to recovery of previously written off doubtful debts totaling UAH163m as a result of its sale to Energomerezha.

Decrease of EBITDA margin caused by accrual of provision for doubtful debts totaling UAH 185m.

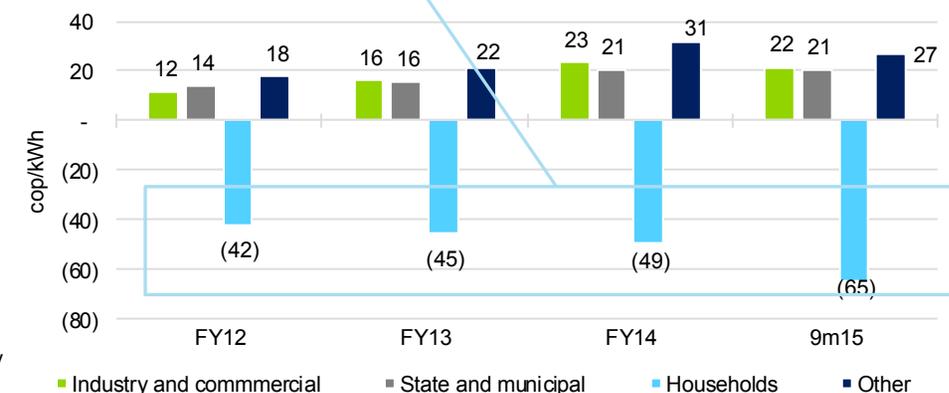
Residential tariffs have historically been highly subsidized and lower than cost.

Revenue per kWh by consumers



Source: Management information

Gross profit



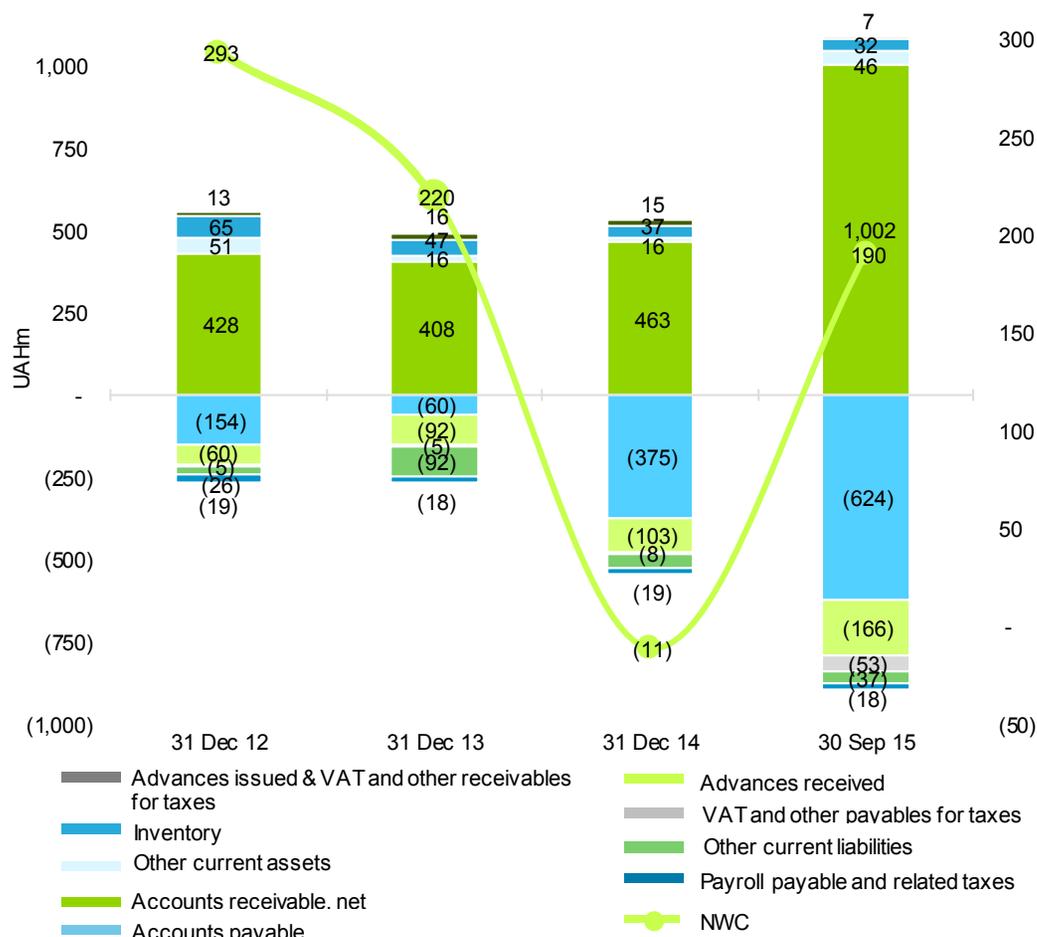
Source: Management information

1.5.3 Financial Statement Analysis

Zaporozhyaoblenergo

Liquidity analysis

Net working capital dynamics



Source: Management information, Deloitte analysis

Liquidity analysis

- Slump in Net working capital from UAH 220m as of end of 2013 to UAH (11)m as of 31 December 2014 was mainly due to an increase of accounts payable due to Energorynok (by UAH 304m) because of payment collection issues with large industrial customers and overdue receivables assignment to Energomerezha in the end of 2014 (UAH 196m outstanding amount as of 31 December 2014).
- The Company faced significant liquidity problems due to non-payment for supplied electricity by the major industrial customer Zaporozhya Ferroalloy Plant. Accounts receivable due from Zaporozhya Ferroalloy Plant increased by UAH 435m during 9m15. Another bad debtors are Zapopizhstal (increase by UAH 56m for the period to UAH 103m as of 30 September 2015), Titanium and magnesium plant (increase by UAH 45m), and Vodokanal (UAH 34m) and other.
- Due to shortfall in cash collection, the Company does not have ability to pay for purchased electricity to Energorynok in full. Accounts payable due to Energorynok increased during 9m15 by UAH 231m and amounted to UAH 591m as of 30 September 2015.

Normalized net working capital

UAHm	31 Dec 12	31 Dec 13	31 Dec 14	30 Sep 15
NWC before normalizations	293	220	(12)	190
Normalizations				
[1] AR due from Zaporizhya Ferroalloy Plant	-	(0)	(0)	(435)
[2] AR due from Vodokanal	(19)	(10)	(27)	(61)
[3] AP due to Energorynok	140	56	360	591
NWC normalized	415	265	320	285
Normalized NWC to revenue, %	7.6%	5.6%	7.9%	4.7%

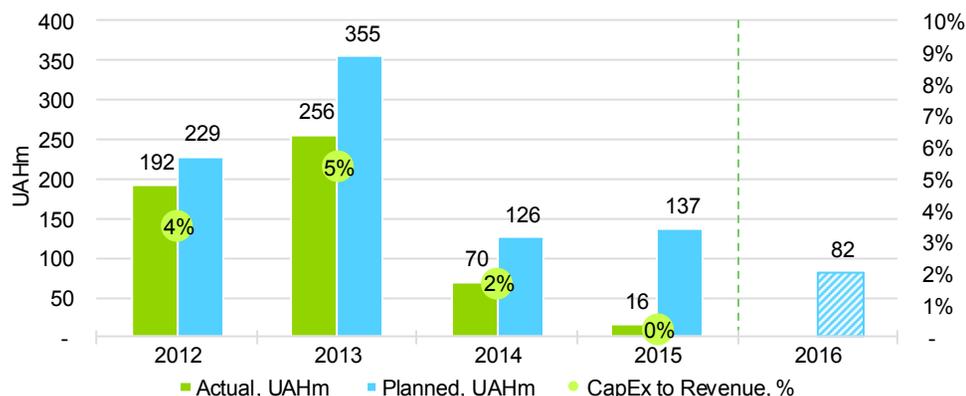
Source: Management information, Deloitte analysis

1.5.4 Future Capital Expenditures

Zaporozhyaoblenergo

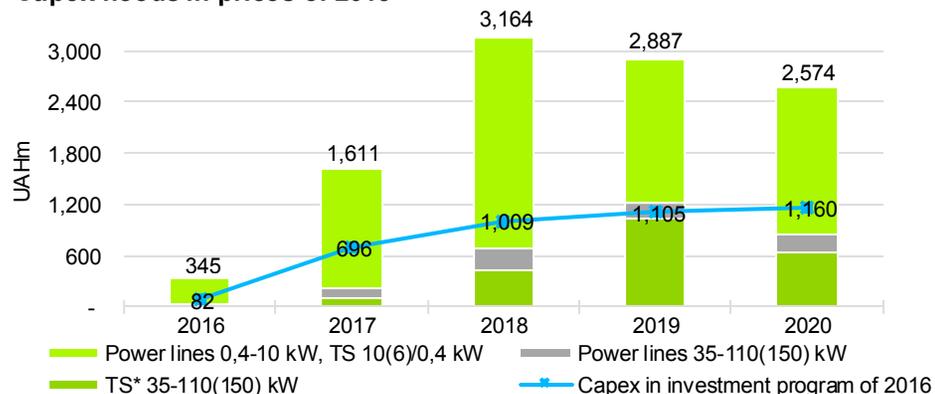
Investment Requirements and Timing of Planned Investments

Capex according to investment program for 2012 - 2016



Source: Management information

Capex needs in prices of 2015



Note: *Transformer substation
Source: Ministry of Energy and Coal Industry of Ukraine

Capital Expenditure Needs

In 2014, actual capital expenditures did not achieve planned level according to the investment program and amounted to UAH 70m or 55.67 percent of the plan.

- UAH 61m (57 percent of the target level) were spent on technical development (upgrading), modernization and construction of electrical networks and equipment.
 - Construction of new power lines: UAH 33.3m (56 percent of the target level)
 - Modernization of power lines: UAH 12.3m (77 percent of the target level)
 - Reconstruction of transmission lines: UAH 0.3m (54 percent of the target level)
 - Construction of new substations, distribution power stations and transformer substations was not financed (planned UAH 4.4m)
 - Reconstruction of distribution power stations and transformer substations: UAH 11.6m (58 percent of the target level)
 - Modernization of distribution power stations and transformer substations: UAH 0.8m (100 percent of the target level)
- UAH 8.4m (44 percent of the target level) were spent on non-technical measures to reduce power consumption (works with AMR and replacement of old meters for households).
- UAH 1.3m (41 percent of the target level) were spent on development of information technology
- UAH 1.3m (49 percent of the target level) were spent on development of communication systems
- UAH 3.1m (89 percent of the target level) were spent other needs including on the reconstruction of call center located at 73 Gorkogo str., Zaporozhya city.

The investment program of 2015 was significantly underfinanced totaling UAH 5.6m or only 10 percent of the planned level as of 30 September 2015.

- UAH 5.6m (13 percent of the target level) were spent on technical development (upgrading), modernization and construction of electrical networks and equipment.
 - Construction of new power lines: UAH 1m (10 percent of the target level)
 - Reconstruction of transmission lines: UAH 1.6m (11 percent of the target level)
 - Reconstruction of distribution power stations and transformer substations: UAH 2.9m (24 percent of the target level)

According to Ministry of Energy and Coal Industry, total investment needs of the Company are estimated at UAH 10,581m for 2016-2020.

1.5.5 Contract Summary

Zaporozhyaoblenergo

Major suppliers and other third party contracts

	Period	Terms of delivery	Payment	Fines	Other
Contract with Energorynok	Till the end of the year, automatically prolonged for each subsequent year if both sides of the contract have not expressed their willingness to terminate the contract a month before the end of it.	Energorynok provides dispatching services and services on transit of electricity by long-distance and interstate electric grid; Actual volume of received electricity at the Oblenergo delivery points is determined based on hourly data of system of commercial accounting.	First part (more than 5% of forecasted (ordered) amount) - till 12am of 1 st day of the month; All other equal parts are paid every working day.	Non-payment in 1-3 days after the end of "period" - 0.05% from the remaining amount; Non-payment after 20th days of the next month - 0.2% from the remaining amount for every day of overdue (no more than double NBU discount rate); Non-payment more than 30 days - additional fine 0.1% from the remaining amount; After non-payment in 3 days after the end of "decade" - 0.03% from the remaining amount to be paid in 3 days (valid only if Oblenergo violated payment terms for more than 3 times during LTM).	Message about ordered monthly volume of electricity purchase has to be provided the next day after adoption of the resolution by NEURC; Energorynok has the right to limit electricity supply if Oblenergo does not pay in full or by dates.
Typical contract with Legal entity	For a calendar year, automatically prolonged for each subsequent year if both sides of the contract have not expressed their willingness to terminate or change the contract a month before the end of it.	Volumes are determined for the year till the 1 st November of previous year by Consumer; Consumer has to provide monthly reports about consumed electricity.	By the 12 th day of payment month - 70% for electricity consumed from 1 st till 21 st ; By the 28 th day of payment month - 30% for electricity consumed from 21 st till the end of the month.	0.5% from the non-paid amount for every day of overdue (no more than double NBU discount rate); In case of excess over agreed volume of consumption and capacity, double tariff for difference. (if consumer has connected capacity 150kW and more, and consumption volume more than 50,000kWh).	-
Typical contract with Individuals	Signed for 3 years, prolonged automatically for 1 year if both sides of the contract have not expressed their willingness to make any changes to the contract a month before maturity;.	The company is obliged to provide planned audit, maintenance, and repair of meters free of charge; The company is obliged to conduct the checking indications on meters equipment.	Payment are made according to current tariffs and volume of consumed electricity during the period stated in the invoice; In the case of changing tariffs, the company is obliged to inform the customer no more than 5 days before new tariff implementation; In the case of providing electricity at different technical standards mentioned in the contract, customer can pay 25% of payment.	Penalties must be paid in accordance with current Ukrainian legislation.	The contract may be terminated in the case if the consumer change the place of living and stop consuming electricity.

Source: Management information, Deloitte analysis

1.6 Preliminary Due Diligence

Cherkassyoblenergo

1.6.1 Business Overview

Cherkassyoblenergo

Location, Facts & Figures on Market Served



Overview

- Cherkassy is a regional center in central Ukraine. Key industries of the region are chemical and agriculture.
- Population of Cherkassy region is 1.2m.
- The Company covers 20.9k sq. km territory of Cherkassy region, where it serves 616,207 residential and 15,815 commercial customers.
- 3,948 employees.

Licenses, authorizations and other permits

- License for supply of electricity at regulated tariffs, dated 24 September 1996.
- License for transmission of electricity by local electric grid, dated 19 September 1996.

Key dates

1913

Construction of Cherkassy power station was started.

1949

Sales department "Energosbyt" of Cherkassy power station was established.

1968

Cherkassy Combined heat and power plant has reached the planned capacity of 230 MW.

1969

The process of full electrification of the region was completed.

1995

The state energy supply company "Cherkassyoblenergo" was established.

1999

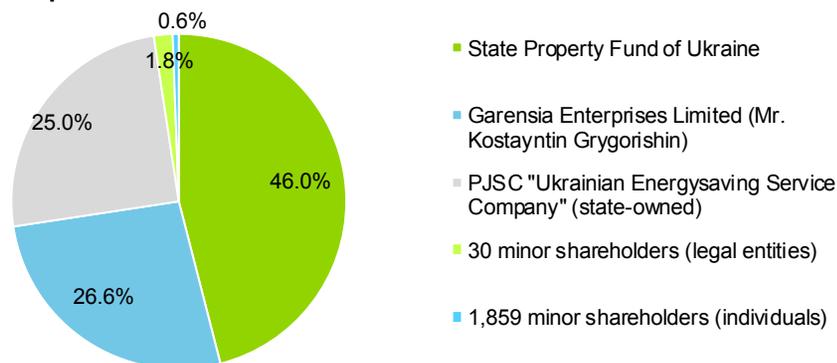
PJSC "Cherkassyoblenergo" was established. By the end of 2002, 54 percent of equity was sold, including 25 percent to the state-owned Ukresko.

1.6.1 Business Overview

Cherkassyoblenergo

Ownership structure and description of minority shareholders

Ownership structure

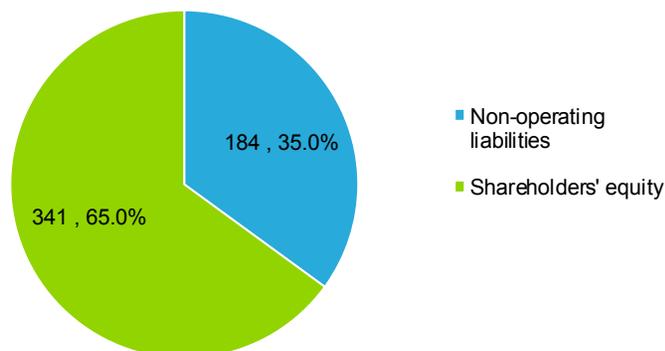


Source: Management information

Minority shareholders

- The top shareholder of Energy Standard Group ("ESG"), Mr. Grigorishin – a Russian citizen – is one of the largest players on the Ukrainian energy industry. Through his investment vehicles, Mr. Grigorishin currently holds interests ranging from 6 to 100 percent ownership in 11 oblenergos in Ukraine, in addition to several large enterprises that manufacture equipment used by oblenergos throughout Ukraine.

Capital structure (book value) as at 30 September 2015, UAHm



Source: Management information

Capital structure (book value)

- There is no interest bearing debt in the company's capital structure.
- Non-operating liabilities represented in the chart to the left includes UAH 169m in claims of creditors under the current bankruptcy case, UAH 11m dividends payable and UAH 4m restructured debt on commission payables.

1.6.1 Business Overview

Cherkassyoblenergo

Overview of key assets

Power lines by capacity as of 31 December 2015

km	Overhead power lines	Cable power lines
150 kV	316	0
110 kV	773	0
35 kV	2,405	-
10 kV	10,034	1,308
6 kV	55	16
0.5 kV	16,318	667
Total	29,900	1,992

Source: Management information

Power stations number by voltage

	Sub-station	MVA
35 kV	136	730
110 kV	30	1,022
150 kV	9	574
6/0,4 - 35/0,4 kV	8,901	1,702
10/6 kV	1	3
PDS ¹ 6-35 kV	82	6
incl. PDS ¹ w ith power transformers	9	n/a
Total	9,159	4,038

Notes: (1) Power distribution stations

Source: Management information

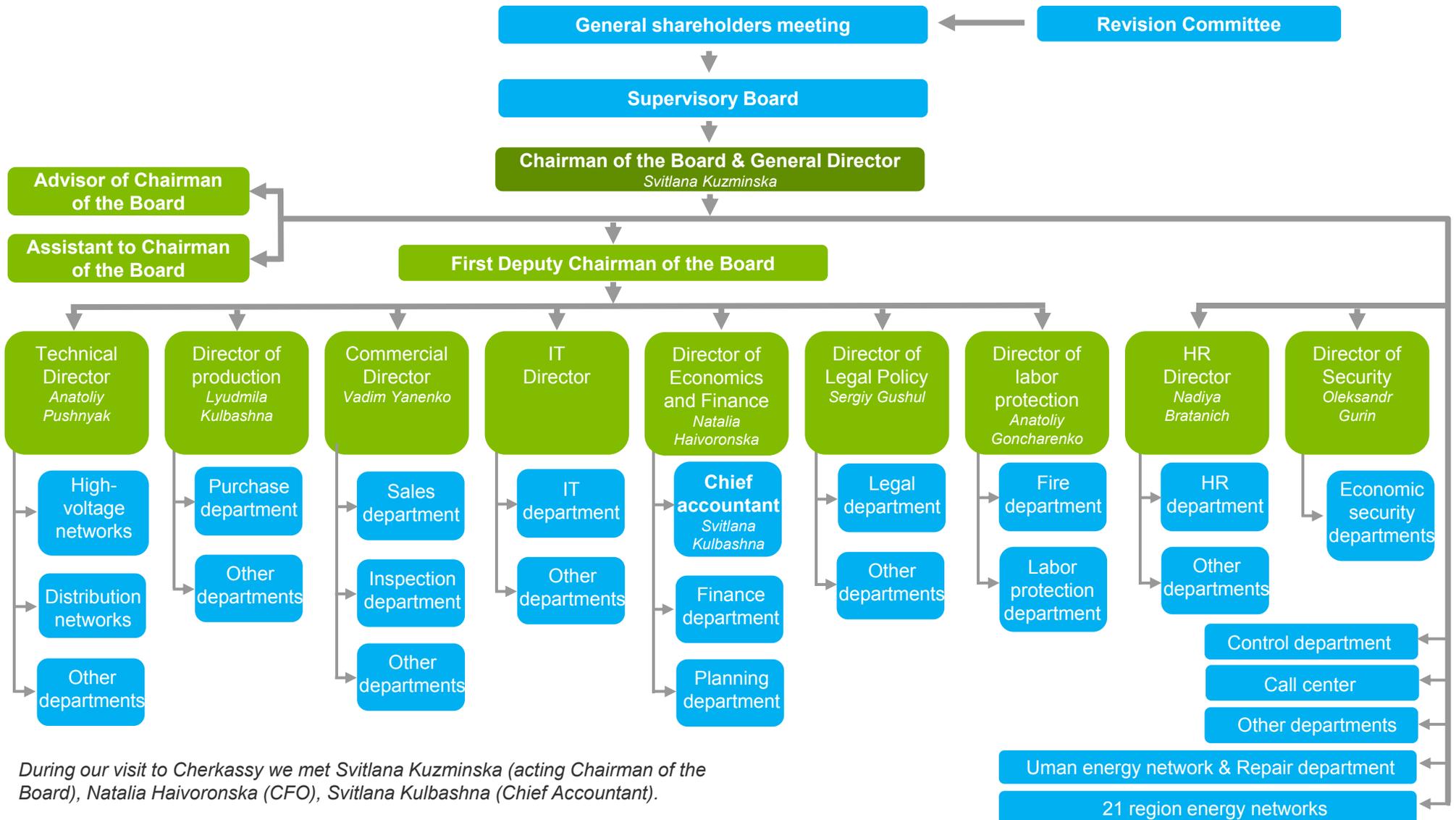
Fixed assets overview

- Based on discussions with management, we understand that a significant part of fixed assets is over 30 years old. As of the date of this report, we have not received any breakdown of fixed assets from management.
- Fixed assets were 62.6% depreciated as of 30 September 2015.
- Please see details on capex needs analysis in Section 1.6.4.

1.6.1 Business Overview

Cherkassyoblenergo

Management Team and Organization Chart

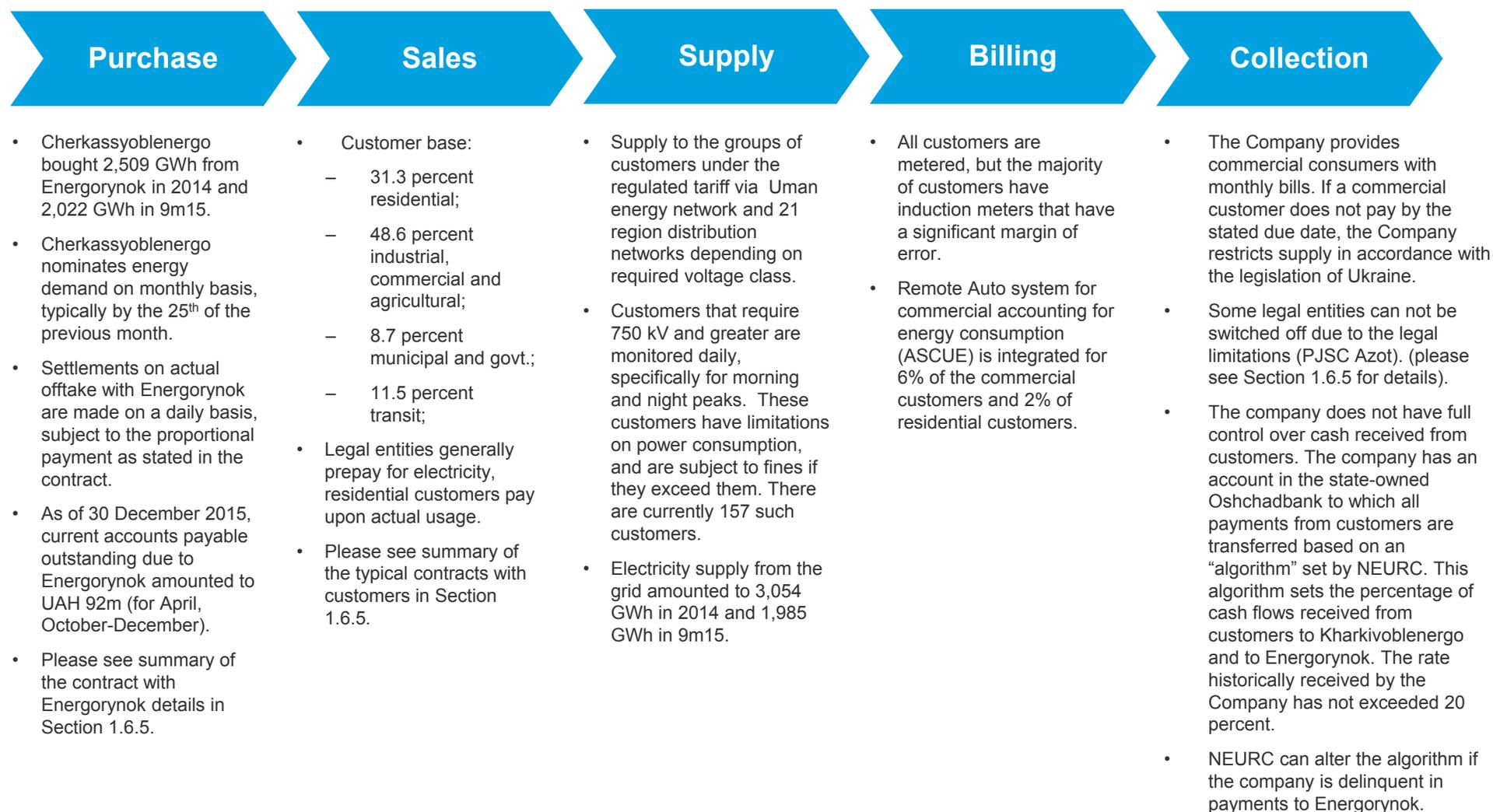


During our visit to Cherkassy we met Svitlana Kuzminska (acting Chairman of the Board), Natalia Haivoronska (CFO), Svitlana Kulbashna (Chief Accountant).

1.6.2 Operational Characteristics

Cherkassyoblenergo

Customer service, billing, collection capabilities



1.6.2 Operational Characteristics

Cherkassyoblenergo

Aggregate commercial and technical losses, bad debts

Electricity movements in the Cherkasyoblenergo grid

m kWh	FY12	FY13	FY14	9m15
Purchased electricity	2,702	2,501	2,509	2,022
Transportation of electricity	877	1,050	974	246
Flow of electricity to the grid	3,579	3,551	3,483	2,269
Technical and commercial losses, actual	487	421	410	273
Actual losses, %	13.6%	11.9%	11.8%	12.0%
Normative losses, %	12.9%	13.4%	13.5%	14.2%
Production needs	19	19	19	11
Electricity supply from the grid, total	3,073	3,110	3,054	1,985
Electricity supply to consumers at unregulated tariff	821	986	914	227
Net electricity supply to own customers	2,251	2,124	2,140	1,758

Source: Management information

Trade accounts receivable

UAHm	31 Dec 12	31 Dec 13	31 Dec 14	30 Sep 15
Accounts receivable	n/d	152	228	n/d
Provision for doubtful debts	n/d	(42)	(65)	n/d
Accounts receivable, net	111	110	164	312
<i>Provision for doubtful debts to total accounts receivable, %</i>	n/a	27.6%	28.3%	n/a

Source: Management information

The company classifies accounts receivable outstanding depending on the time overdue (i.e. 6 month to 1 year, 1 to 2 years, and 2 to 3 years; debts over 3 years old are classified as irrecoverable) and charges a provision for doubtful accounts ranging from 5 to 100 percent.

Commercial and technical losses

- The percentage of actual losses includes commercial and technical losses during the period as the share in total flow of electricity to the grid. Normative losses are provided by NEURC.
- The level of actual technical and commercial losses decreased from 13.6 percent in 2012 to 12.0 percent for 9 month 2015, which is 2.2 p.p. less than normative level of losses for the period.
- Net electricity supply to own customers slightly decreased during 2012-2014. Based on discussions with management, we understand the difference to be due to decreased industrial production in the region.

Bad debts

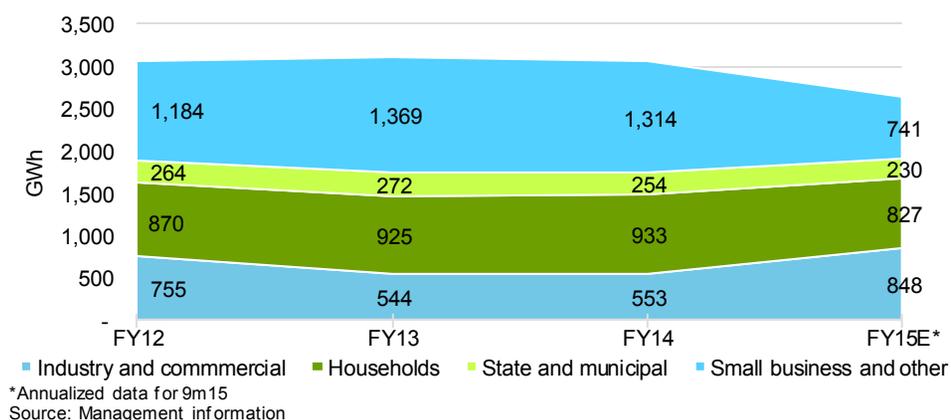
- Based on discussions with management, we understand that a significant and growing percentage of accounts receivable were overdue, with some accounts with overdue balances over three years old. As of the date of this report, we have not received the breakdown of these overdue receivables by length of time overdue.
- The largest customer of the Company is PJSC Azot (nitrogen plant owned by Dmitry Firtash), which has experienced recent financial difficulties. For 9m15 PJSC Azot only paid for 59.9 percent of the consumed electricity. As of the end of 2015, the balance outstanding amounted to approximately UAH 200m. The Azot facility cannot be switched off due to ecological laws.
- The second largest debtor is state-owned Irdyntorf (which produces heating pallets), which has historically paid with significant delays (outstanding balance is approx. UAH 9m).
- Municipal water suppliers (divisions of the Cherkassyvodokanal) also typically make late payments.

1.6.2 Operational Characteristics

Cherkassyoblenergo

Electricity customers served

Sales volume



Customer base

- Households represent a significant share of customers (31.3 percent in volume terms in 9m15). Over the past few years, household consumption has increased due to more energy-intensive appliances and consumer electronics. However, in 2015 population consumption is expected to decrease due to energy savings following the increase in tariffs.
- Industrial and other commercial customer consumption has been decreasing due to the economic downturn. In addition, sales volume to industrial and commercial customers increased in 2015 due to PJSC Azot switching from a transit customer (classified as other) to a supply customer.
- Competition from suppliers under non-regulated tariffs has a negative impact on sale volumes. According to management, beginning in 2012, 11 solvent commercial clients switched to such suppliers, which provided discounts and favorable payment terms. Annual consumption of these clients amounted to approximately 66 GWh.

Top five clients in 2014 - 9m15

#	Company	2014			9m15		
		GWh	UAHm	% of revenue	GWh	UAHm	% of revenue
1	PJSC Azot	64	79	5%	278	376	24.3%
2	Uman teplichniy combinat	68	47	3%	47	32	2.1%
3	Techno-Invest	-	-	-	10	17	1.1%
4	Umanvodokanal	7	10	1%	5	8	0.5%
5	Combinat of bread products "Talnoe"	11	15	1%	8	14	0.9%
	Others	2,903	1,314	90%	1,637	1,104	71.1%
	Total	3,054	1,466	100%	1,985	1,552	100.0%

Source: Management information, Deloitte analysis

Overview of key customers

- The largest customer is PJSC Azot. The nitrogen plant has direct contract with Energorynok, and by default is a transit client for Cherkassyoblenergo. According to management, when the plant does not pay Energorynok on time, Energorynok switches the supplies from direct to via Cherkassyoblenergo, and the plant becomes a supply customer and debtor for Cherkassyoblenergo. PJSC Azot is also the key bad debtor of the Company.
- Other top customers consumed 70 GWh in 9m15 and represented 4.6 percent of the respective revenue (please see the table to the left).

1.6.3 Financial Statement Analysis

Cherkassyoblenergo

Income Statement Analysis

Statement of financial performance

UAHm	FY12	FY13	FY14	9m15	Δ*, %
Revenue	1,360	1,326	1,466	1,552	41.2%
Cost of goods sold	(1,288)	(1,209)	(1,358)	(1,432)	40.6%
Gross profit	72	116	108	120	47.8%
Operating expenses & income					
Administrative	(21)	(23)	(25)	(18)	(4.0)%
Other operating income	18	16	37	24	(13.5)%
Other operating expenses	(17)	(52)	(46)	(10)	(72.0)%
EBITDA	52	58	74	116	108.8%
Normalized EBITDA	51	57	72	114	110.4%
Depreciation	(43)	(40)	(42)	(31)	(1.7)%
Financial income	0.5	0.7	1.1	0.5	(39.4)%
Financial expense	(0.01)	(0.04)	-	(1)	n/a
Other non-operating expenses, net	0.02	(3)	(7)	(0.3)	(94.1)%
Income tax	(5)	(12)	(23)	(3)	(85.2)%
Profit after tax	4	4	4	82	n/a
% Gross profit margin	5.3%	8.8%	7.4%	7.7%	
% EBITDA margin	3.8%	4.3%	5.1%	7.5%	
% Normalized EBITDA margin	3.8%	4.3%	4.9%	7.3%	

Note: * - annualized for 9m15 compared to FY14

Source: Management information, Deloitte analysis

EBITDA normalizations

UAHm	FY12	FY13	FY14	9m15
EBITDA	52	58	74	116
N 1. Income on holding housing and social assets	(0.1)	(0.1)	(0.1)	(0.1)
N 2. Expenses on holding housing and social assets	1	1	1	0.4
N 3. Income on sale of current and other assets	(8)	(8)	(15)	(7)
N 4. Cost of sold current and other assets	6	6	12	5
N 5. Compensation of payments to employees on military service	-	-	-	(1)
N 6. Payments to NJSC Energy Company of Ukraine	-	0.1	-	-
Normalized EBITDA	51	57	72	114

Source: Management information, Deloitte analysis

Income statement overview

- **Revenue** increased during 2012-2015 due to increasing tariff rates, while sales volume slightly decreased, due to lowered industrial output and competition from the suppliers under non-regulated tariffs.
- Salary of administrative personnel amounted to UAH 12m in 9m15 or 67.7 percent of the **administrative expenses**.
- **Other operating income** is mainly represented by income from new connections totaling UAH 9m for 9m15 and UAH 6m income from operating leases. UAH 13m of the total UAH 38m other operating income in 2014 was generated by sale of current assets. Income from fines and penalties (UAH 2m in 9m15 and UAH 4m in 2014), according to management, is accrued on a cash basis.
- **Other operating expenses** in 9m15 mainly consisted of the cost of sold current assets (UAH 5m). In 2013-2014 other operating expenses mainly included provision for doubtful debts (UAH 35m in 2013 and UAH 25m in 2014).
- Salary expenses increased since 2012 and varied depending on the category of employees (see chart below).

Average number of employees and salary by position



1.6.3 Financial Statement Analysis

Cherkassyoblenergo

Balance Sheet Analysis

Statement of financial position

UAHm	31 Dec 12	31 Dec 13	31 Dec 14	30 Sep 15	Δ*, %
Property, plant & equipment, net	288	320	352	338	(3.8)%
Intangible assets, net	1	1	1	1	(25.0)%
Investment property	1	1	1	1	(9.1)%
CIP	11	22	3	3	0.0%
Non-current assets, net	301	344	357	343	(3.8)%
Inventory	39	26	21	18	(13.1)%
Accounts receivable, net	112	110	164	312	90.7%
Advances issued	12	3	4	1	(85.7)%
Advances received	(16)	(26)	(57)	(58)	0.2%
Accounts payable	(46)	(33)	(51)	(35)	(31.3)%
Payroll payable and related taxes	(4)	(0.1)	(5)	(11)	122.9%
VAT and other payables for taxes, net	(3)	(6)	(17)	(40)	140.5%
Other current assets	12	11	46	68	48.1%
Other current liabilities	(79)	(86)	(91)	(63)	(31.1)%
Net working capital	26	(1)	13	192	n/a
Financial investments	14	1	0.3	-	(100.0)%
Deferred tax asset	1	-	-	-	n/a
Other liabilities	(3)	(7)	(6)	(5)	(16.7)%
Total	339	337	364	530	45.6%
Financed by:					n/a
Bank loans	3	-	-	-	n/a
Cash and cash equivalents	(7)	(18)	(8)	(8)	(6.1)%
Interest-bearing net debt/(cash)	(4)	(18)	(8)	(8)	(6.1)%
Non-operating liabilities					
Debt under the bankruptcy case	89	89	89	169	89.9%
Dividends payable	-	9	10	11	7.1%
Restructured debt on commission	-	-	-	4	n/a
Adjusted net debt	85	81	91	176	93.7%
Deferred tax liability	-	0.1	14	14	0.0%
Shareholders' equity	254	256	260	341	31.2%
Total	339	337	364	530	45.6%
Accounts receivable turnover, days	30	30	41	55	
Accounts payable turnover, days	13	10	14	7	
Current Ratio	1.2	1.0	1.1	1.9	
Quick Ratio	0.9	0.8	1.0	1.8	
Operating Cash Flow Ratio	0.2	0.4	0.2	0.1	

Source: Management information, Deloitte analysis

Balance Sheet overview

- **A bankruptcy case** was launched in 2004 by two companies (Transnova claiming UAH 37m and Artek claiming UAH 17m). Those companies appeared with claims on payment related to contracts for supplies of sunflower seeds and fuel. Energorynok joined the case later and became the largest creditor with a UAH 89m claim on old debt from 2001-2003. Fines and penalties amounted UAH 26m in addition. Amicable agreement on restructuring with Energorynok was reached in 2015, however the process was suspended and agreement was not signed. As of the date of this report, the bankruptcy case has not been resolved.
- **Fixed assets:** revaluation of fixed assets took place in 1996 and partially in 2005. There was no revaluation upon transition to IFRS in 2012. The Company has two recreation centers in Cherkassy oblast and a restaurant in the head office. Recreation centers are accounted for at approximately zero NBV.
- **Accounts receivable** increased as of 30 September 2015, due to the largest customer PJSC Azot (please see previous page for details).
- **Other assets** are mainly accounts receivable for new connections, prepayments for fuel, spare parts and lease, and tax assets.
- According to management, **accounts payable** due to Energorynok as of 1 January 2016 increased to UAH 92m current amount outstanding for 2015 (for April, October-December).
- The company does not have access to credit facilities due to the ongoing bankruptcy.
- **Dividends payable:** as the Company is under bankruptcy proceeding, it does not pay dividends to any investor aside from the SPFU (for the direct 46 percent share) but accrues the respective amount of dividend liabilities.
- **Restructured debt on commission:** the Company has UAH 3m restructured commission payable due to Ukrpochta for collection of payments from customers and UAH 1m due to Oshchadbank. Commission to Ukrpochta is 2 percent and, according to management, the Company is attempting to reduce the share of payments via Ukrpochta.
- **Other liabilities:** The company had UAH 5m of deferred income as of 30 September 2015 being by nature the tax benefit which was canceled under the new Tax Code.
- The Company has current accounts in the state-owned Oshchadbank, Ukrgasbank and Ukreximbank and salary projects in Raiffeisen and Privatbank. The Company lost approximately UAH 7m to Energobank in 2014 when it became bankrupt. According to management, impairment of the restricted cash was recognized.

1.6.3 Financial Statement Analysis

Cherkassyoblenergo

Cash Flow Statement Analysis

Cash Flow Statement

UAHm	FY12	FY13	FY14	9m15
Operating activities				
Sales ¹	1,612	1,573	1,696	1,711
Other proceeds	54	33	65	126
Less cash paid for:				
Goods	(1,330)	(1,198)	(1,354)	(1,506)
Payroll expenses	(209)	(230)	(232)	(183)
Tax and fees liabilities	(77)	(96)	(97)	(28)
Other expenditures	(26)	(29)	(45)	(106)
Net cash flow from operating activities	24	53	34	13
Cash flows from investing activities				
Purchases of property, plant and equipment	(20)	(40)	(43)	(13)
Net cash used in investing activities	(20)	(40)	(43)	(13)
Cash flows from financing activities				
Bank loans	3	-	-	-
Repayment of loans	-	(3)	-	-
Dividends	-	-	-	(1)
Net cash provided by financing activities	3	(3)	-	(1)
Net cash flow for the reporting period	7	10	(9)	(1)
Balance at beginning of year	0	7	18	8
Balance at the end of the year	7	18	8	8
Sales excluding VAT	1,343	1,311	1,413	1,425
Cash conversion rate	98.8%	98.9%	96.4%	91.9%

Note: (1) - including VAT

Source: Management information, Deloitte analysis

Cash flow overview

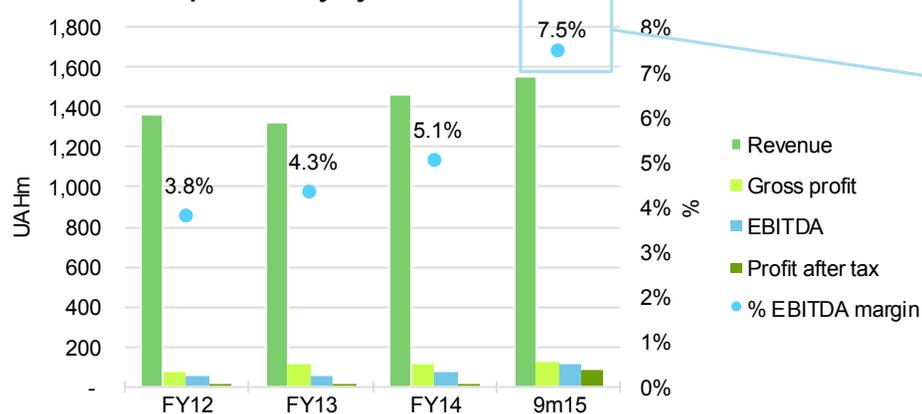
- **Operating activities:** Cash collection ratio decreased from 96.4 percent in 2014 to 91.9 percent for 9m15 mainly due to non-payments from the largest customer PJSC Azot.
- **Investment activities:** The Company used cash flow received from operating activities and cash balances available on the accounts to finance its capex. As the company has not utilized any debt capital, capex has been underfunded for years due to limited cash flow from operations. Please see Section 1.6.4 for more details on capex.
- **Dividends:** According to management, due to the bankruptcy process the Company paid dividends only to SPFU and it is currently in the litigation process trying to return UAH 4m in dividends paid to Mr. Grigorishin.

1.6.3 Financial Statement Analysis

Cherkassyoblenergo

Operating profitability analysis

Revenue and profitability dynamics

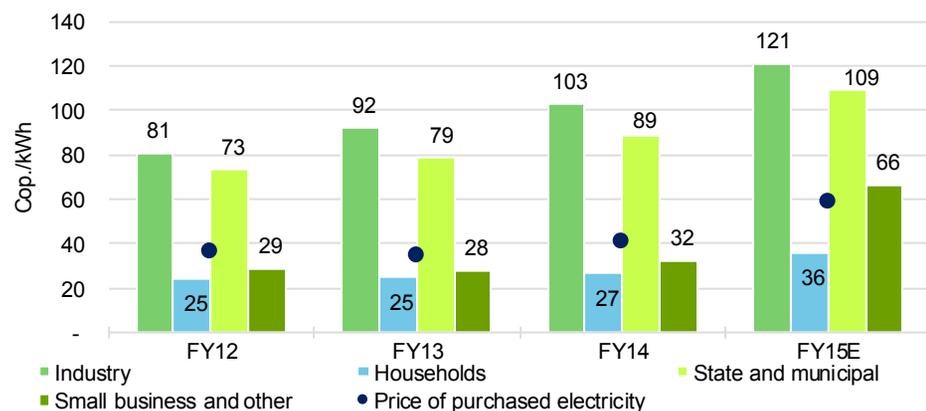


Source: Management information

EBITDA margin increased in 9m15 due to savings of other operating expense (bad debt allowance expense was not accrued).

Residential tariffs have historically been highly subsidized and lower than cost

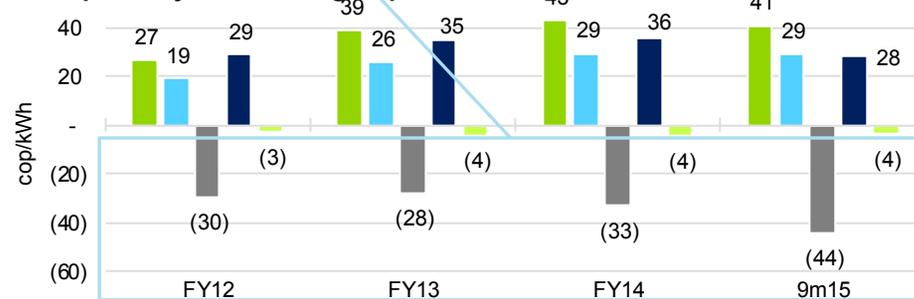
Revenue per kWh by consumer group



Source: Management information

Deloitte Consulting LLP

Gross profit by consumer group*



Legend: Industry and commercial, State and municipal, Households, Small business and other, Transportation of electricity

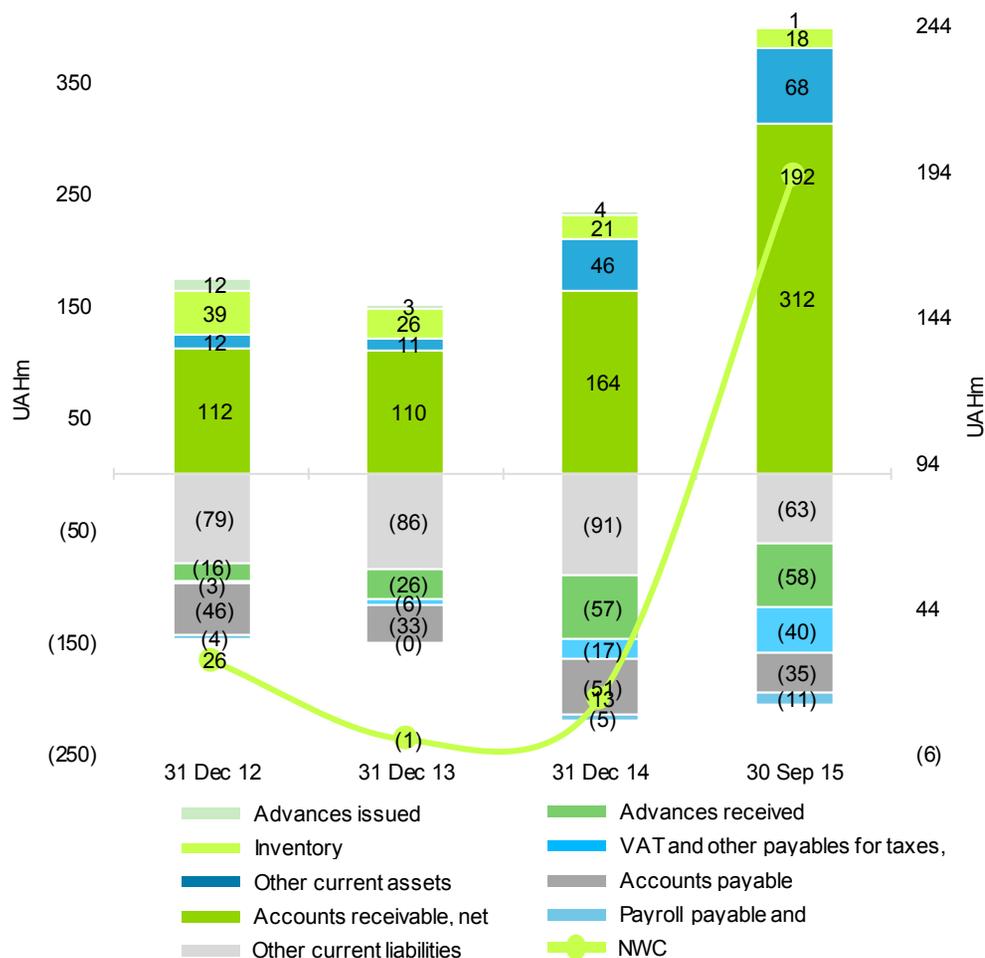
* Gross profit is calculated based on the weighted average cost of purchased electricity
Source: Management information

1.6.3 Financial Statement Analysis

Cherkassyoblenergo

Liquidity analysis

Net working capital dynamics



Source: Management information, Deloitte analysis

Liquidity analysis

- As of 30 September 2015, the Company's NWC increased significantly, mainly due to underpayments from PJSC Azot and the resulting increases in accounts receivable:

Normalized net working capital

UAHm	30 Sep 15
NWC before normalizations	192
Normalizations	
N 1. Overdue accounts receivable due from PJSC Azot for 9m15	(151)
Normalized NWC	41

Source: Management information, Deloitte analysis

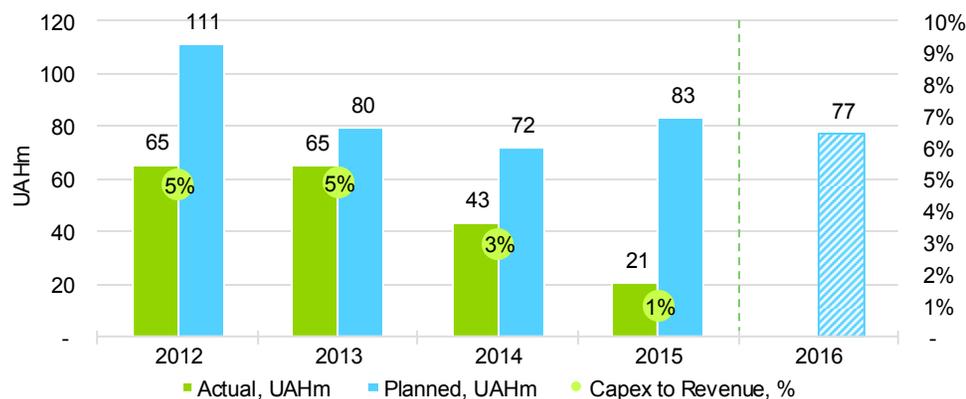
UAH 151m is the difference between revenue accrued on PJSC Azot for 9m15 and cash received.

1.6.4 Capital Expenditures

Cherkassyoblenergo

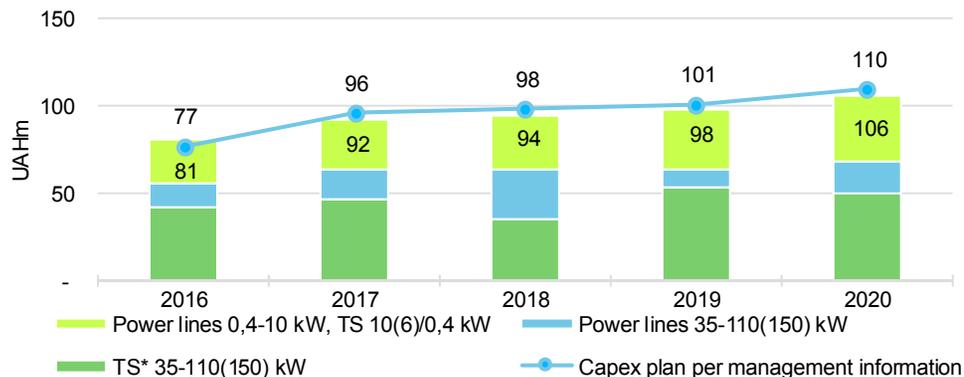
Investment Requirements and Timing of Planned Investments

Capex according to investment program for 2012 - 2016



Source: Management information

Capex needs in prices of 2015



Note: *Transformer substation;

Source: Ministry of Energy and Coal Industry of Ukraine

Capital Expenditure Needs

- The investment program of 2015 was significantly underfinanced. Total investment spending was UAH 21m or only 24.7 percent of the planned level as of 31 December 2015.
- UAH 9.9m (16 percent of the target level) were spent on technical development (upgrades), modernization and construction of electrical networks and equipment.
 - Construction of power lines (0.4 kW):UAH 1.7m (78 percent of the target level).
 - Reconstruction of power lines (0.4 kW):UAH 1.3m (20 percent of the target level).
 - Construction of power lines (10(6) kW):UAH 0.3m (125 percent of the target level).
 - Construction of cable lines (10(6) kW):UAH 1.2m (101 percent of the target level).
 - Construction of high-voltage power lines (110 (150) kW): UAH 1.3m (50 percent of the target level).
 - Reconstruction of high-voltage power lines (110 (150) kW): UAH 1.2m (9 percent of the target level).
 - Modernization of high-voltage power lines (110 (150) kW): UAH 1.4m (64 percent of the target level).
 - Designing of grids and its reconstruction: UAH 1.5m (70 percent of the target level).
- UAH 4.6m (58 percent of the target level) were spent on measures to reduce energy losses (purchase of electric meters and transformers).
- UAH 3.2m (65 percent of the target level) were spent on development of information technology (purchase of software and related equipment).
- UAH 0.5m (17 percent of the target level) were spent on purchase of vehicles.
- UAH 2.3m (76 percent of the target level) were spent other needs including purchase of instruments and equipment.
- Ministry of Energy and Coal Industry of Ukraine has developed a plan of development of power distribution networks for 2016-2020 for each disco in the context of implementation of the Law of Ukraine "On principles of functioning electricity market of Ukraine". According to this program, total investment needs of the Company are approx. UAH 472m for 2016-2020.

1.6.5 Contract Summary

Cherkassyoblenergo

Major suppliers and other third party contracts

	Period	Terms of delivery	Payment	Fines	Other
Contract with Energorynok	Till 31.12.2007, automatically prolonged for each subsequent year if both sides of the contract have not expressed their willingness to terminate the contract within 30 days of expiration.	Energorynok provides dispatching services and services on transit of electricity by long-distance and interstate electric grid; Actual volume of received electricity at the Oblenergo delivery points is determined based on hourly data of system of commercial accounting.	First part (more than 15% of forecasted (ordered) amount) - till 12am of 1 st day of the month; All other parts more than 15% of forecasted amount - till 6 th , 11 th , 16 th , 21 st days of the month, respectively; Till 26 th Oblenergo has to pay the rest of forecasted amount for the month; In three days after the end of the month Oblenergo has to pay the rest of actual supplies amount for the month; In case of excess of actual amount over forecasted (ordered), Oblenergo has to pay in full in 3 days of every period.	After non-payment in 1 days after the end of "period" - 0.05% from the remaining amount to be paid in 3 days; After non-payment after 20 th days of the next month - 0.2% from the remaining amount for every day of overdue (no more than double NBU discount rate); After non-payment for more than 30 days - additional fine 0.1% from the remaining amount; After non-payment in 3 days after the end of "decade" - 0.03% from the remaining amount to be paid in 3 days (valid only if Oblenergo violated payment terms for more than 3 times during LTM); In case of excess (over 5%) of actual amount over forecasted (ordered), Oblenergo has to pay 1% of difference between actual volume from forecasted (ordered).	Message about ordered monthly volume of electricity purchase has to be provided the next day after adoption of the resolution by NEURC; Energorynok has the right to limit electricity supply if Oblenergo does not pay in full or by dates.
Typical contract with Legal entity	For a calendar year, automatically prolonged for each subsequent year if both sides of the contract have not expressed their willingness to terminate or change the contract within 30 days of expiration.	Volumes are determined for the year till the 15 th October of previous year by a Consumer; Consumer has to provide monthly reports about consumed electricity.	Payment during a month with installments by the 5 th , 15 th , and 25 th day of payment month.	Double NBU discount rate for every day of overdue + 3% annual + inflation index; In case of excess over agreed volume of consumption and capacity, double tariff for difference (if a consumer has connected capacity 150kW and more, and consumption volume more than 50,000kWh).	Oblenergo has the right to limit or stop electricity supply (warning 3 days before) if Consumer does not make payment by dates.
Typical contract with Individuals	The contract is signed for the period of 3 years, and is prolonged automatically for 1 year if both sides of the contract have not expressed their willingness to make any changes to the contract a month before the end of it; The contract could be terminated in the case if the consumer change the place of living and stop consuming electricity.	The company is obliged to provide planned audit, maintenance, and repair of meters free of charge; The company is obliged to conduct the checking of indications on meter equipment.	Payments are made according to current tariffs and volume of consumed electricity during the period stated in the invoice (or till 10th day of the month); In the case of changing tariffs, the company is obliged to inform the customer no more than 5 days before new tariff implementation; In the case of providing electricity at different technical standards mentioned in the contract, customer can pay 25% of payment.	0.1% of debt for every day overdue.	Technical standards of electricity stated in the contract.

Source: Management information, Deloitte analysis