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USAID Financing
Growth TO #18
Ukraine Energy
Privatizations

Task 1: Situation
Assessment,
Strategy and
Work Plan for
Privatization

Deloitte Consulting LLP



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Table of Contents: Sections 1-3

Section 1: Situation Assessment

- Energy Assets Privatization Plan
- Summary of Target Oblenergos Ownership + Performance
- Summary and Impacts of Future Electricity Market Changes

Section 2: Analysis and Recommendations

- History of Electricity Privatization in Ukraine
- Current Privatization Legislation and Process
- Constraints to Privatization

Section 3: Strategy and Privatization Work Plan

- Goals and Strategy for Privatization
- Issues Impacting Privatization Probability and Valuation
- Summary of Findings from Oblenergos
- Execution Plan for Oblenergo Sales
- Alternative Options for Oblenergo Sales
- Privatization Timelines
- Roles and Responsibilities for Support to SPFU
- Preliminary Buyer Sounding

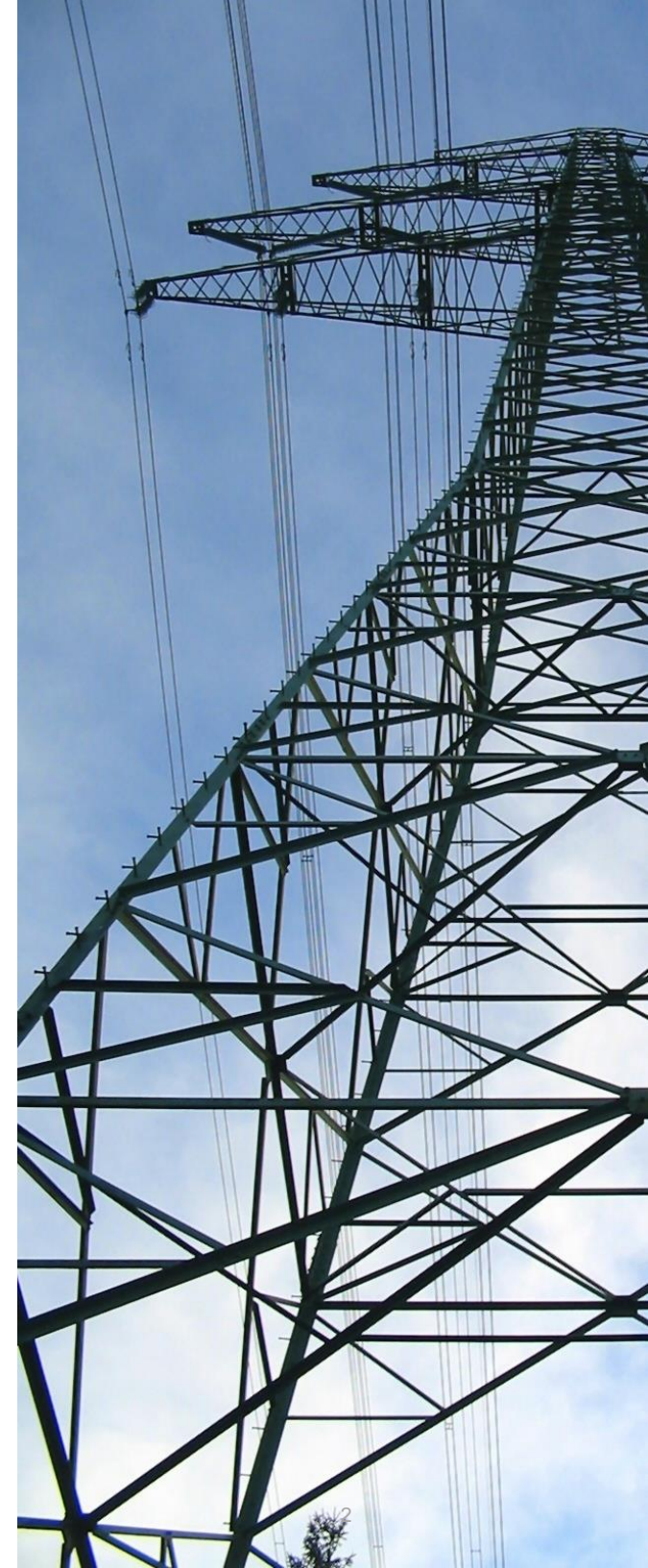


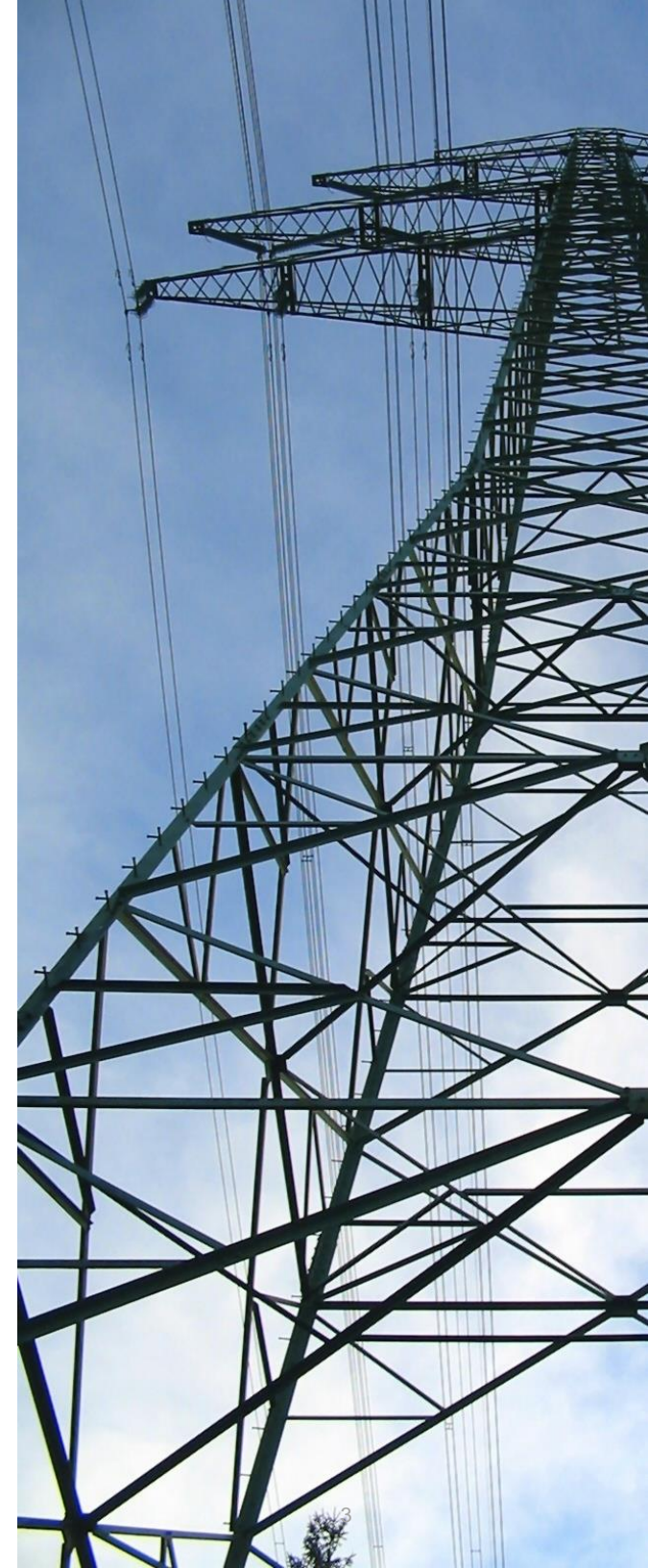
Table of Contents: Appendix

Appendix A: Analysis of Current and Future Electricity Market

- Electricity Sector Overview
- Legislation and Governance in Electricity Sector
- Market Mapping, Subsidies and Liquidity in Current State
- Tariff-Setting Procedures and Incentive Tariffs
- Future Retail Market and Impacts of Transition

Appendix B: Best Practices in Energy Sector Privatization

- Poland
- Bulgaria
- Georgia
- Nigeria



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Scope of Work

This Report has been prepared under a Scope of Work (the SOW) prepared by USAID and approved on November 10, 2015. The SOW initially called for Deloitte to assess and report on findings with regard to PJSC "Centrenergo" plus three regional oblenergos (JSC "Khmelnitskoblenergo," JSC "Mykolaivoblenergo," and JSC "Kharkivoblenergo"). In January 2016, USAID requested that Deloitte add three additional regional oblenergos to this assessment, located in Zaporozhya, Cherkassy, and Ternopil. The analysis of these three additional oblenergos is contained here. Because shares in Centrenergo were not transferred to the SPFU during the period of performance of the SOW, Deloitte was unable to gain access to Centrenergo and has not included any analysis or recommendations on Centrenergo in the Report.

Deloitte has prepared two sections of the Report, based on the required deliverables in the SOW, detailed as follows:

Task 1 Report

- A. Analysis and Recommendations
- B. Strategy and Workplan

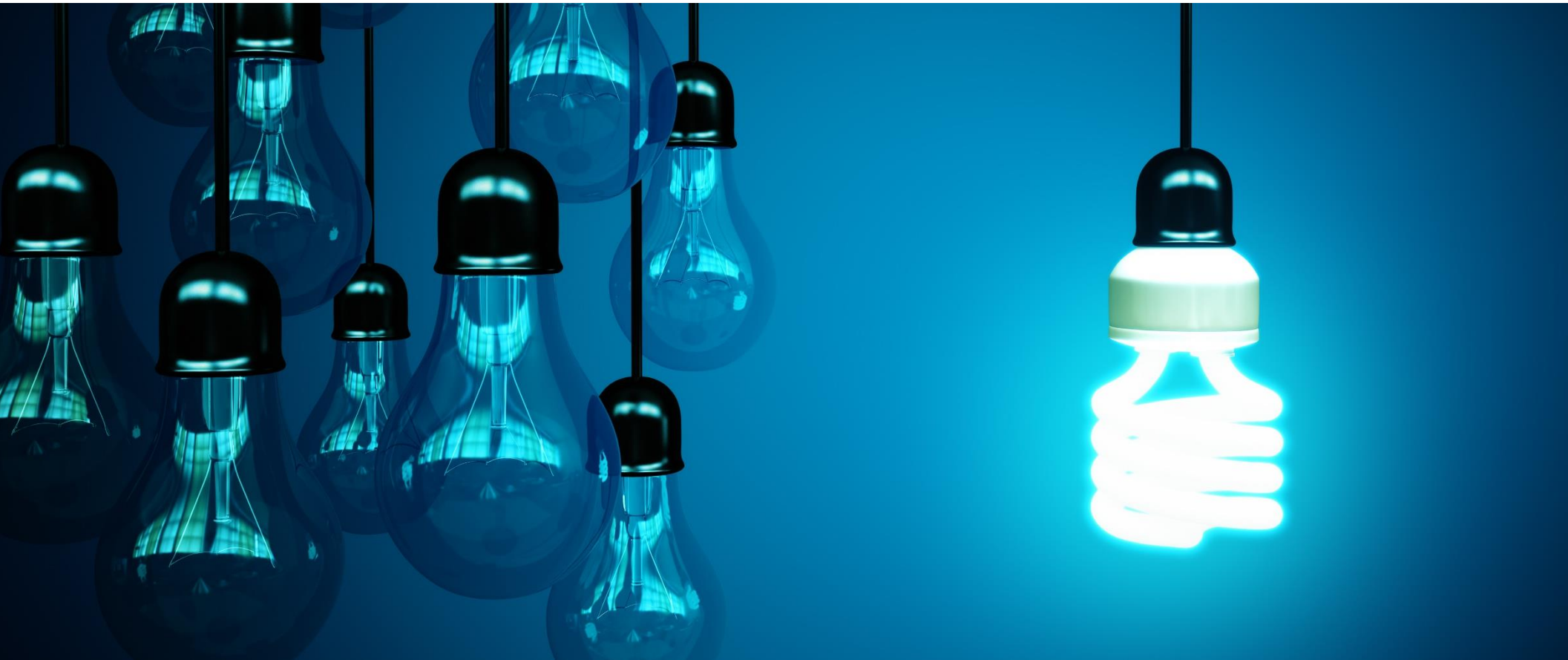
Task 2 Report

- A. Preliminary Due Diligence
- B. Indications of Fair Value

In preparing the Report, Deloitte requested and collected two sets of detailed financial and due diligence information from the six regional oblenergos listed above. Deloitte personnel visited all six oblenergos, toured their facilities, and held in-depth discussions with all oblenergo management teams with regard to current and anticipated future operating conditions. Deloitte personnel have also met and requested information from numerous sources within the Government of Ukraine. These include the SPFU, the Anti-Monopoly Office, the National Electricity Regulatory Commission, the Ministry of Economy Development and Trade, among others. In order to understand international perspectives on the Ukrainian energy market, Deloitte contacted a number of energy utilities and operators around the world. Deloitte also collected and reviewed information on privatization methods and approaches used in comparable emerging markets during the past fifteen years, including their level of success in achieving the goals and objectives of the local host governments. Our findings and recommendations are based on the information received through this due diligence effort conducted between November 10, 2015 and February 29, 2016.

Section 1:

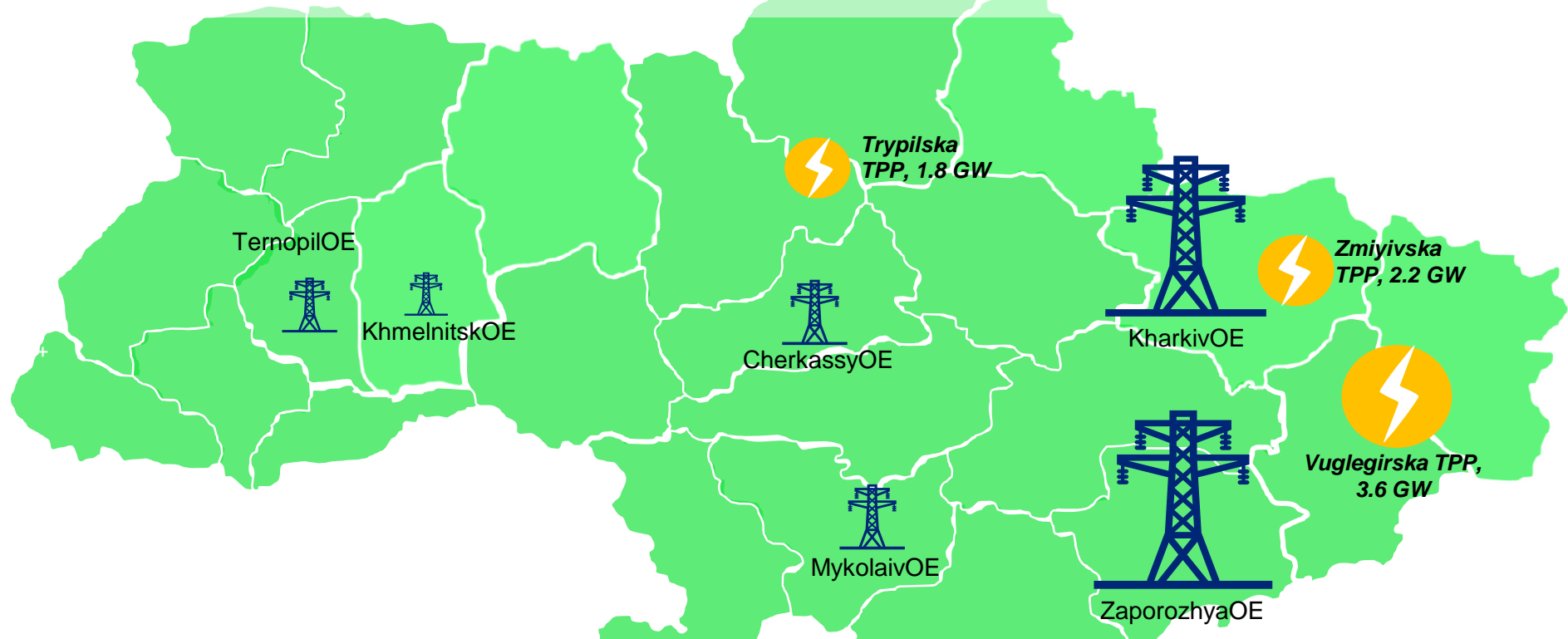
Situation Assessment



Energy Asset Privatization Plan

SOEs to be privatized in 2016

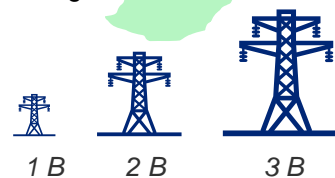
The Council of Ministers has decreed that the SPFU will privatize stakes in the following electricity SOEs in 2016



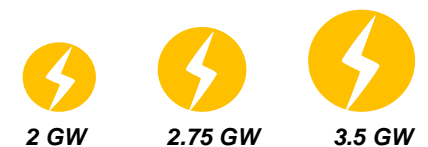
Company	Revenue 2014 (M UAH)	EBITDA 2014 (M UAH)	SPFU shares to be sold
CherkassyOE	1,466	79	46.0%*
KharkivOE	3,948	284	65.0%
KhmelnytskyOE	1,101	109	70.0%
MykolaivOE	1,505	111	70.0%
TernopilOE	787	38	51.0%
ZaporozhyaOE	4,070	185	60.25%
Centrenerg	7,558	311	78.3%

*additional 25% stake in Cherkassy owned by SPFU through Ukresco

Oblenergos Revenue, 2014 UAH

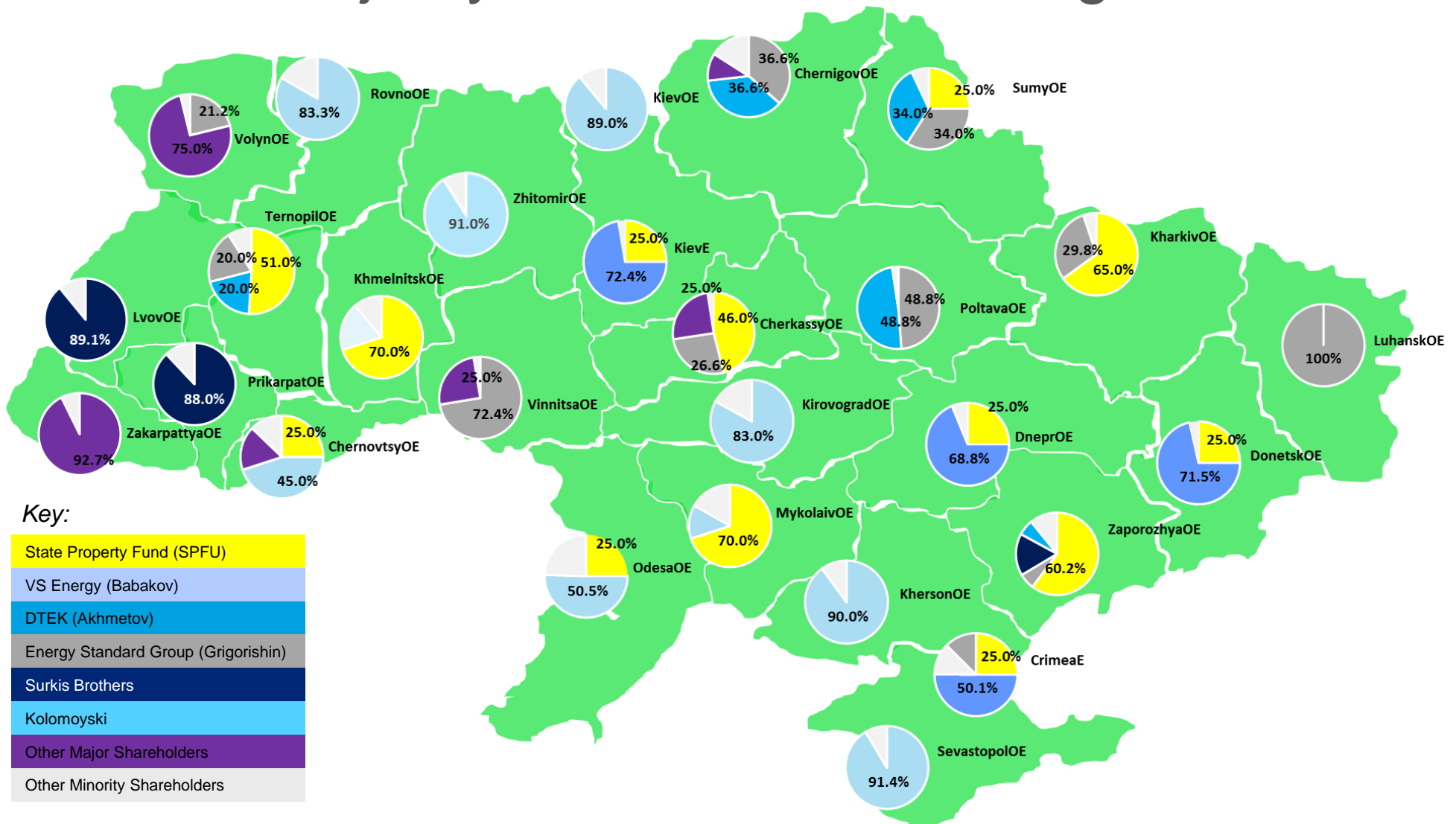


Centrenerg TPPs, Actual capacity, GW



Summary of Oblenergos and Owner Groups

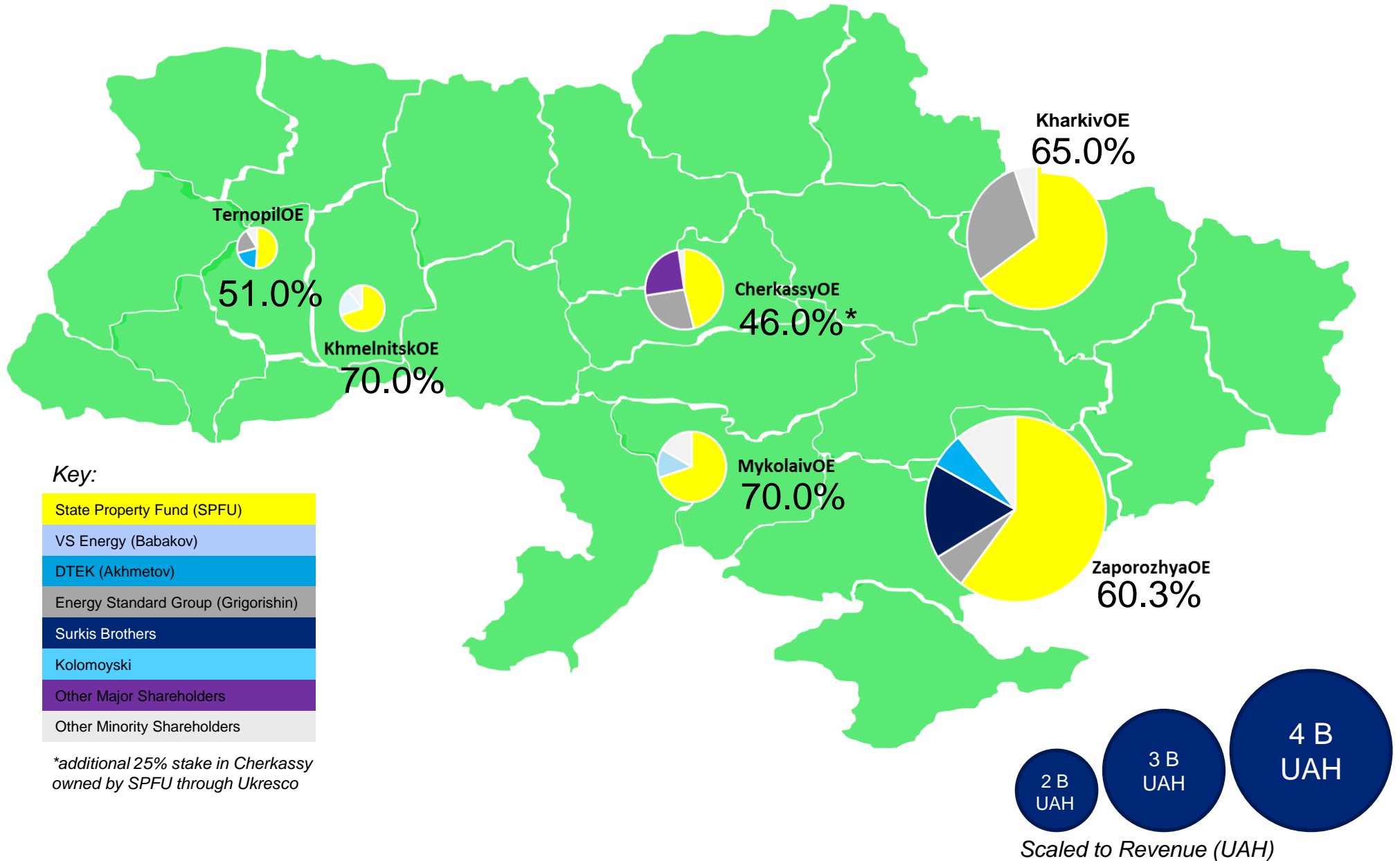
SPFU is majority owner of 6 Oblenergos



As a result of earlier privatizations, several Ukrainian and Russian elites hold a large portion of the outstanding shares in Oblenergos throughout Ukraine, including those designated for privatization in 2016.





































Target Oblenergos for 2016 Privatization

CMU has decreed SPFU will sell all shares in Oblenergos by May 2017



Recent Target Oblenergo Performance

Snapshot of latest 2015 finances and operations

Oblenergo	Revenue (9m15, m UAH)	EBITDA Margin (9m15, %)	Personnel (9m15, # Employees)	Electricity Losses (9m15, ATC)	Receivables (net, 9m15, m UAH)	% Residential Customers (9m15)
KhmelnitskOE	 977	 11.1%	 3,559	 14.3%	 70	 36.6%
TernopilOE	 699	 12.0%	 2,200	 16.7%	 85	 53.5%
KharkivOE	 3,438	 9.5%	 6,731	 11.7%	 718	 35.5%
MykolaivOE	 1,507	 7.2%	 3,555	 11.7%	 69	 39.5%
CherkassyOE	 1,552	 7.5%	 3,948	 12.0%	 312	 31.3%
ZaporozhyaOE	 6,075	 3.9%	 5,761	 7.3%	 1,002	 20.8%

Future market changes to impact Oblenergo core business

Integration with Energy Community (EC) demands the following structural changes to the electricity market. The changes proposed in the Law on Electricity Market are compliant with the EC directives in the following areas:

Area	Current State	Future State	Proposed Benefits	Risks to Oblenergos
Energy sales	<ul style="list-style-type: none"> All energy sold from local Oblenergo 	<ul style="list-style-type: none"> Direct sales allowed between generation companies and industrial customers 	<ul style="list-style-type: none"> Competition for customers between energy companies 	<ul style="list-style-type: none"> Competition will demand some Oblenergos change business model in order to keep customer base
Distribution asset ownership	<ul style="list-style-type: none"> Oblenergos own the lines and sell power 	<ul style="list-style-type: none"> A DSO owns and operates the lines Generators and independent suppliers sell power to end users 	<ul style="list-style-type: none"> Asset ownership cannot be used to constrain competition 	<ul style="list-style-type: none"> Oblenergos will separate businesses into distribution system and supply operations
Tariffs and cross-subsidy	<ul style="list-style-type: none"> Residential customers are subsidized by other customer categories 	<ul style="list-style-type: none"> Tariffs reflect true cost of service for all customer classes and cross-subsidies eliminated 	<ul style="list-style-type: none"> Generation and distribution migrate towards cost reflectivity without subsidy 	<ul style="list-style-type: none"> Heavily dependent on regulator to ensure transparent, predictable market transition
Integration with EU market	<ul style="list-style-type: none"> Small amounts of power traded out of country 	<ul style="list-style-type: none"> International integration to buy and sell power across EU lines 	<ul style="list-style-type: none"> Enhanced security of electricity supply 	<ul style="list-style-type: none"> International competition may drive up prices for domestic generation

Progress toward EU integration dependent on adoption of Law on Electricity Market and implementation of secondary regulation to define market transition

Outcomes of energy market structural changes

The proposed future energy market structure presents both risks and opportunities that will impact Oblenergo performance and may impact privatization outcomes

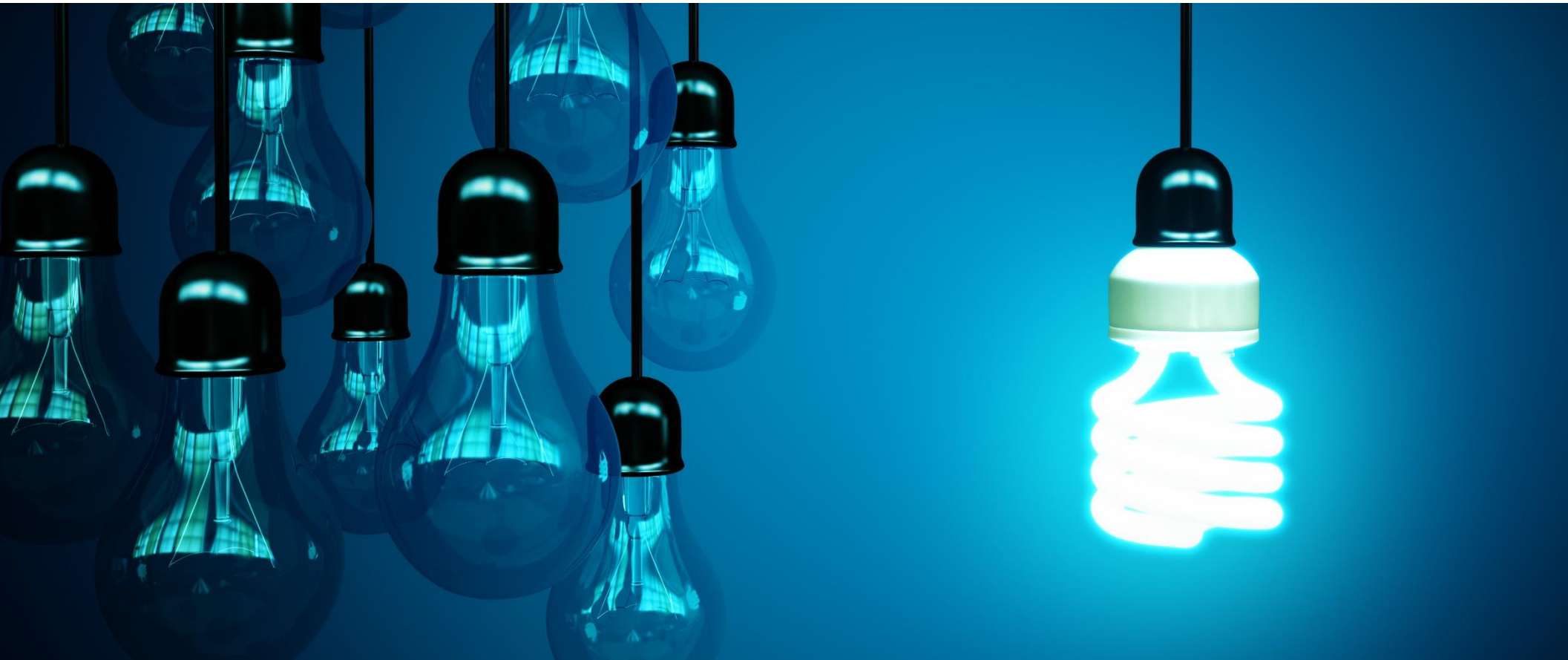
Business Aspects	Opportunities	Risks
Operations	<ul style="list-style-type: none"> • Incentive based tariff scheme: New tariff scheme will facilitate long term planning. • Capital Investment: Proposed ROI reflective of true cost of capital could generate increased investment, in turn reducing technical and commercial losses and improving performance. • Efficiency Gains: May result from increased capital investment. • Labor force: Technical competency may be complemented by improved business and commercial capability. 	<ul style="list-style-type: none"> • Service Quality: Oblenergos who face risks of losing larger (industrial) customers will have to focus on improving customer relations and service quality. • Business planning: Oblenergos currently do limited one year business plans.
Financial Performance	<ul style="list-style-type: none"> • Overall: May improve with market operationalization, new tariff scheme, improved business operations and planned price increases. • Planned tariff increases: Eliminating subsidies may help improve Oblenergo financial performance. • Incentive based tariff scheme: Better reflects cost of service, may stimulate capital investment, and promote liquidity. • Access to capital: Market reform, new tariff methodology and planned ROI on new investments may improve Oblenergo financial performance and facilitate access to capital • Shareholder value: Improved financial performance, efficiency gains and service quality increases may add shareholder value. 	<ul style="list-style-type: none"> • Unclear Regulatory Framework: NEURC needs clear tariff setting methodologies and simple, inexpensive application process. • Planned price increases: Political commitment to tariff increases towards cost-of-service needs to be sustained • Asset Ownership: Any potential “third-party” asset ownership issues may adversely impact if Oblenergo has to “sell low or buy high” to clarify ownership. • Loss Revenues/Stranded Capital: May lose customers in liberalized market.

Planned electricity market reforms create potential risks, but will be viewed positively by competent investors and should increase potential investor interest.

See Appendix A: Analysis of Current and Future Electricity Market for detailed analysis

Section 2:


Analysis and Recommendations



Prior privatization in Ukraine's energy sector

Experiences, strategies and outcomes

Timeline

- 
- 1991 - USSR dissolves, Ukraine gains independence
 - 1992 - SPFU established, Law “On Privatization of Assets of SOE”s passed, determined key privatization principles
 - 1994 - Mass privatization program targeted 8000 SOEs
 - 1995 - Parliament reduces mass privatization targets, establishes list of 5,200 strategic assets including all power entities
 - 1997 - Power companies allocate preferential shares to employees (includes all Oblenergos, between 13-30% of shares allocated). Oblenergos prepare allocation plans to execute sales through tender and stock exchange. 5 tenders fail to attract interest based on lack of clarity on tariff policy, debt restructuring, and state retaining large shares in enterprise
 - 1998 - Sale of 5 minority stakes in Oblenergos (incl. 20% of Ternopiloblenergo) through tenders. Due to lack of investor pre-qualification and price-only evaluation criteria, many tenders were won by Ukrainian financial intermediaries and on-sold to local elites. As a result, CMU approved new Program of Privatization of the Power Industry, shifted evaluation criteria to investment commitment and offered broader managerial control. Dispute between Min of Energy and SPFU leads to cancellation of Mykolaivoblenergo tender.
 - 2001 - 2003 - Sales of 6 Oblenergos through tender seen as a success for attracting international investors (AES enters Ukrainian market). 12 other Oblenergo privatizations planned then cancelled. Later in this period, frequent allegations of “shadow privatizations”.
 - 2004 - Establishment of “Energy Company of Ukraine” as a holding company to manage and sell GENCOs and Oblenergos
 - 2007 - Assets transferred to SPFU to perform pre-privatization preparation prior to transfer to “Energy Company of Ukraine”
 - 2008-2013 - Share sales of Oblenergos announced and cancelled throughout this period. Process of transferring assets to “Energy Company of Ukraine” nominally continues although SPFU does not transfer ownership of Oblenergos into holding co.
 - 2014 - Liquidation of “Energy Company of Ukraine” – assets held within this vehicle are transferred back to Ministry of Energy. AES exits.
 - 2015 - CMU Decree 271 “On Holding Transparent and Competitive Privatization...” prescribes sale of remaining state-owned Oblenergos

Regulation Initiating Oblenergo Privatization

The CMU Decreed Sale of Oblenergos for 2016

Legal Framework

Founding Legislation: Law “On Privatization of State Property” 1992 sets out general process

CMU Bylaw 525: “Decision on approval of the privatization and sale of Group G, and the energy sector” 2012, approved privatization decision initiated Privatization Planning by SPFU

CMU Bylaw 271: “On Holding Transparent and Competitive Privatization in the Years 2015-2016” 2015, set targets by grouping together similar asset types and prescribed privatization steps for groups, including Group G Oblenergos and Centrenergo:

- The principal method of the Targets’ privatization was determined to be competitive tender with the open bid on auction principle.
- No limitations to the pool of participants shall be stated apart from those envisaged by legislation and sanctions lists.
- The privatization term shall not exceed 2 years from the passage date (deadline May 12, 2017)

Target Oblenergos by Group

Target Oblenergos are separated into groups G and V:

Group	Description	Oblenergos
Group “Г” (G)	Corporatized SOEs deemed to have strategic value or require individual approach to privatization	<ul style="list-style-type: none">• KharkivOE,• KhmelnytskOE,• MykolaivOE,• TernopilOE,• ZaporozhyaOE
Group “В” (V)	Corporatized SOEs not deemed to have strategic value	<ul style="list-style-type: none">• CherkassyOE

Eligible Buyers

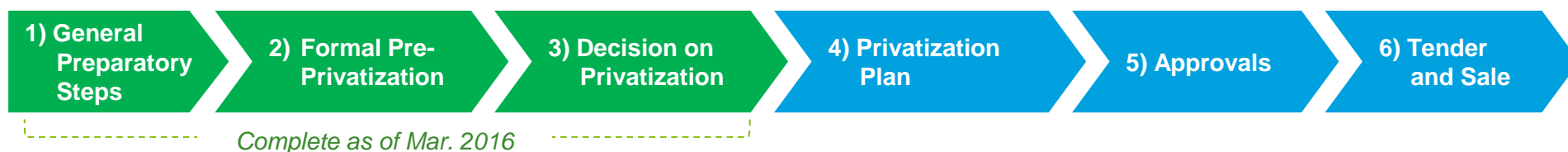
The law contains the following prescriptions for potential buyers:

- Buyers may be: (1) citizens of Ukraine or foreign citizens (2) legal entities, incorporated both in Ukraine and in other countries
- Buyers may not be:
 - (1) individuals and legal entities registered in offshore zones and countries that are listed by FATF as non-cooperative in anti-money laundering;
 - (2) state authorities;
 - (3) employees of SPFU;
 - (4) legal entities directly or indirectly controlled by aforementioned individuals/legal entities

Legal Timeline for Oblenergo Privatizations

Overview of Privatization Process

Privatization Steps



Pre-Privatization Concerns:





- CMU 271 **limits the opportunity for a technical prequalification procedure** prior to auctions
- **Minority shareholder** participation as bidders or as ongoing owners will be a concern for new bidders
- **Energy market transition** to 3rd Package Legislation will change tariff model and legal structure of market, difficult for bidders to value these risk elements
- **Cash deposit requirement of 20%** prior to auction is restrictive and not common in other markets, may limit bidder participation
- **CMU 525 conflicts with Privatization Law** on Privatization Commission's role in creating Privatization Plan for Group G
- Vigilant oversight by SPFU during 2016 is important to **minimize asset stripping, employment increases**, and other pre-privatization schemes

Post-Privatization Concerns:

- Privatization outcomes are **often challenged in court by minority shareholders**, other interests or state bodies
- **Financial, legal and social liabilities** should be identified and disclosed prior to tender
 - Following the auction, the buyer may discover other liabilities and obligations, delaying or cancelling the sale
- Court proceedings can deter privatization decision or derail closing for years. **Essential to root out schemes and liabilities prior to sale to prevent fraudulent cases against sale**
- **Conditions precedent** are common in utility privatizations; process for license and asset transfers and other transition steps need to be clearly understood for each SOE to avoid delays to closing after the auction process

Timeline for Oblenergo Privatizations

Roles and Key Terms of Sale

	4) Privatization Plan	5) Approvals	6) Tender and Sale
SPFU Actions 	<ul style="list-style-type: none"> Leads due diligence/preparation Marketing to bidders Privatization Plan SOE governance Public communications 	<ul style="list-style-type: none"> N/A 	<ul style="list-style-type: none"> Guides prequalification approval Auction notice and date Conducts auction based on Privatization Plan Satisfies conditions precedent Public communications plan
GOU / Others' Actions 	<ul style="list-style-type: none"> Privatization Commission reviews Plan, submits to CMU NEURC addresses bidder questions on market model 	<ul style="list-style-type: none"> CMU approves Privatization Plan AMC provides permit on sector concentration NEURC reviews license transfer applications 	<ul style="list-style-type: none"> NEURC approves license transfers Tender Commission (SPFU and Ministries responsible for entity) conduct preparations for and execution of tender
Legal Terms 	<ul style="list-style-type: none"> Law "On State Privatization Program" details Privatization Commission makeup CMU 525 designated group to create plan which differs slightly from the Privatization Law's composition of Commission 	<ul style="list-style-type: none"> Bidders must submit AMC permit application prior to bid day (AMC has 3 months to respond, can delay timing) SOE must obtain permission for license transfer from NEURC prior to buyer taking ownership of assets 	<ul style="list-style-type: none"> CMU 271 dictates competitive tender on open auction without technical prequalification Sale must conclude 30-45 days after notice is very aggressive, constricting timeline Buyer must assume liabilities set out in Privatization Plan
Progress 	<ul style="list-style-type: none"> Due diligence and Plan development underway for Group G entities 	<ul style="list-style-type: none"> N/A CMU to review and approve Privatization Plan (legally, must be submitted by Commission) 	<ul style="list-style-type: none"> Legislation removed 5%-10% pre-sale requirement, restrictions own government-owned foreign buyers

Summary of Constraints to Privatization

Constraints to success of privatization exist within the processes, bylaws, and laws of the privatization program

Process



Entities executing privatization

SPFU

- Prequalification Procedures
- Bid Criteria and Evaluation
- Undesirable Buyers
- Minority shareholders
- Non-transparent operations, asset stripping, payment schemes increased

Description

Responsible Parties

Summary of Issues

Relevant Documents

- Privatization Plans
- Vendor Due Diligence Reports
- SPFU governance plans

Bylaws



Entities directly regulating privatization, electricity

CMU, NEURC

- Time Constraints between Notice and Auction
- Limitations on Bidders
- Privatization Commission role, if any
- Incentive tariff scheme

- CMU Bylaws on Privatization Processes
 - 271, 525
- NEURC Regulations on Incentive Based Tariff Procedures:
 - 293, 898, 899, 1009, 1029, 1030, 1031, 1032,

Laws



Other entities that can enact or related regulations or laws that impact process

VR, AMC, NBU

- Deposit Requirement
- Foreign Currency Repatriation
- AMC and NEURC roles in transaction
- Dispute Arbitration site
- Implementation of new Electricity Law and market changes

- Law “On privatization of state property”
- Law “On electricity”
- Bylaw “Regulation on concentration”
- Bylaw “On approval of the procedure for conducting tenders on the sale of shares of joint stock companies”
- Bylaw “On settlement of the situation in the money and foreign exchange markets Ukraine”

Privatization and Regulatory Constraints

SPFU can use Privatization Plans to improve process



Process

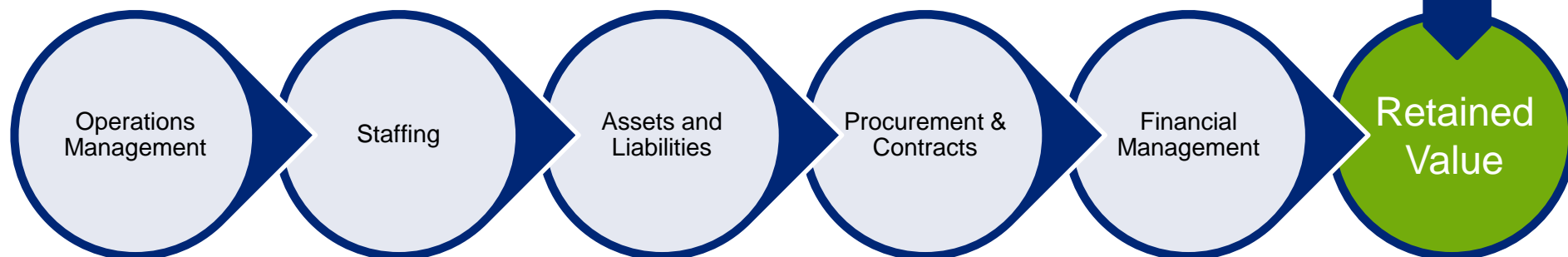
- For Group G entities, the SPFU can create privatization plans to further detail and clarify sale procedures
- **Recommendation: focus on qualitative or technical prequal. criteria and promoting transparency throughout process**

Issue	Constraint	Impact	Recommendation
Prequalification Procedures	<ul style="list-style-type: none"> • Time and process limitations do not allow for thorough buyer due diligence 	<ul style="list-style-type: none"> • Unqualified or undesired investors can win tenders 	<ul style="list-style-type: none"> • Add technical prequal. • Expand time limit to 180 days • Prequalify bidders before auction notice date
Bid Evaluation	<ul style="list-style-type: none"> • Live auction creates price-only criteria for winner of bid 	<ul style="list-style-type: none"> • Limited correlation between purchase price and ability to make investments over time 	<ul style="list-style-type: none"> • Include investment obligations in evaluation • Transparent prequalification process for bidders in Privatization Plan
Undesirable Buyers	<ul style="list-style-type: none"> • Some local elites (including current shareholders) may operate without transparency 	<ul style="list-style-type: none"> • Ownership change in sector may not improve management 	<ul style="list-style-type: none"> • Detailed public disclosure requirements for bidders in Privatization Plan
Non-transparent SOE operations	<ul style="list-style-type: none"> • Companies engage in asset stripping, schemes, hiring, and investors pay consequences 	<ul style="list-style-type: none"> • Investors will hold off on bids or discount assets that expose them to undue risk 	<ul style="list-style-type: none"> • SPFU governance plans • Publically expose “schemes” through vendor due diligence
Communications	<ul style="list-style-type: none"> • No unified, organized approach to media/stakeholders/buyers 	<ul style="list-style-type: none"> • Unorganized communication from govt. creates uncertainty 	<ul style="list-style-type: none"> • Assistance to the SPFU for strategic communications

Oblenergo Oversight Before Privatization

SPFU can use KPIs to retain value

Corporate Governance Best Practices



Issue	Risk	Mitigation action
Operations management	<ul style="list-style-type: none"> Existing management teams abdicate from corporate governance responsibilities during privatization process 	<ul style="list-style-type: none"> SPFU issues management order stating all transactions over UAH 2.5 million require written concurrence from Head of SPFU or designee, over UAH 1.0 million require written Supervisory Board approval and notification to SPFU SPFU introduces performance monitoring plan consistent with current Oblenergo KPIs Provide incentives to current management teams based on achieving/maintaining KPIs SPFU monitors performance on more frequent basis
Staffing	<ul style="list-style-type: none"> Unnecessary staff increases to provide severance and benefits to additional employees 	<ul style="list-style-type: none"> SPFU issues management order stating any new hiring requires written concurrence from head of SPFU or designee Fix staffing levels and include as a KPI in performance monitoring plan
Assets and Liabilities	<ul style="list-style-type: none"> Assets sold off through non-transparent transactions, debts forgiven, new liabilities 	<ul style="list-style-type: none"> SPFU closely monitors and manages asset sales, liability increases, and debt transactions prior to and during privatization plan
Procurement & Contracts	<ul style="list-style-type: none"> New contracts for non-essential capital equipment and operation activities will be procured 	<ul style="list-style-type: none"> SPFU issues management order stating any proposed procurement or new contracts over UAH 2.5 million need written concurrence from head of SPFU or designee (concurrence for procurements is needed from SPFU in advance) Develop KPI for procurements and include in performance monitoring plan Tender all new procurements following GoU procurement guidelines
Financial Management	<ul style="list-style-type: none"> Account receivable neglected Payments to creditors ignored 	<ul style="list-style-type: none"> Develop cash flow plan and include in performance monitoring plan for management SPFU monitors cash flows through bi-weekly reporting prior to privatization

Privatization Constraints and Recommendations

CMU can use decree to amend privatization bylaws



Bylaws

- Privatization Bylaws: Current privatization program initiated by, and responsive to, guidelines laid out in CMU 271
- Electricity Bylaws: Incentive based tariff scheme would allow needed ROI on new capital investment for new shareholders
- **Recommendation: CMU issue decree specific to power privatizations to expand time frame, buyer pool, and ensure proper stakeholder engagement**
- **Recommendation: NEURC accept privatization preparatory documentation as admission to incentive tariff scheme.**

Issue	Constraint	Impact	Recommendation
Time Constraints	<ul style="list-style-type: none"> • CMU 271 limits tender window to 30-45 days after announcement 	<ul style="list-style-type: none"> • Limits SPFU ability to prequalify, investors to compile bids • Missed deadlines 	<ul style="list-style-type: none"> • Expand timeframe to 180 days for greatest flexibility
Privatization Commission	<ul style="list-style-type: none"> • Privatization Commission required by law, but CMU 525 delegated all authority for Privatization Plan to SPFU 	<ul style="list-style-type: none"> • May complicate creation and passage of Privatization Plan or create legal claims later in the process 	<ul style="list-style-type: none"> • Convene formal Privatization Commission to submit Privatization Plan
Incentive Tariff Scheme	<ul style="list-style-type: none"> • Target Oblenergos have not received approval for incentive tariff scheme, application process is resource-intensive and results are uncertain 	<ul style="list-style-type: none"> • High barriers to incentive tariff reduce the appeal of program and likelihood that new investors will apply 	<ul style="list-style-type: none"> • NEURC, SPFU collaborate on privatization plan and offer assurance that implementing plan will enable incentive tariff

Key Privatization Bylaws Recommendation

Integration of Privatization Plan and Investment Requirements with Incentive-Based Tariff Application for Privatized Oblenergos

Description:

The **CMU should decree** that NEURC, SPFU, and the Ministry of Energy and Coal **jointly draft the conditions of sale** (as the part of the Privatization Plan or separate document to be approved by CMU), to include **Oblenergo's admission to incentive-tariff** upon completion of the privatization.

NEURC should provide assurances that the **conditions of sale** (and the SPA) meet the investment and reporting requirements and, and **after the first year of their successful implementation**, the Oblenergo **will be admitted to the incentive-based tariff scheme and receive** a 3-year tariff schedule and rate of **return of 15-17%** on new investments.

Rationale:

Investors will not be able to recover service costs or make reasonable investment returns under the current tariff regime. Access to the incentive-based tariff scheme will allow for acceptable rates of return and encourage productive new investment. Convening NEURC, SPFU, and the Ministry with a CMU order, will provide assurances to investors. There is legal precedent for such an intervention by the CMU.

Recommended Path Forward:

1. CMU creates bylaw decreeing NEURC, SPFU, and Ministry draft the conditions of sale that, if implemented, will allow migration of Oblenergo to incentive tariff
2. Following the SPFU's order, NEURC, SPFU, and Ministry issue bylaws detailing process for granting the incentive tariff to the investor that is compliant to the conditions of sale
3. Advisors to convene NEURC, SPFU, Ministry, and technical experts; create consensus on approved investment plan to be included in the conditions of sale
4. SPFU will include a notice written by NEURC detailing the specifics of the conditions for the incentive-based tariff and investment plan in the data rooms for investors
5. SPFU, NEURC and Ministry will oversee implementation of the conditions of sale

Privatization and Regulatory Constraints

Legal system can adopt changes that improve laws



Laws

- Laws and regulations on banking, currency, electricity market, arbitration create additional risks for investors
- ***Recommendation: Demonstrate commitment to fair legal treatment of international investors, amend or adopt new laws where possible***

Issue	Constraint	Impact	Recommendation
Minority Shareholders and SOE Management	<ul style="list-style-type: none"> • Strategic investors will prefer to take full ownership of entity, not work with local elites 	<ul style="list-style-type: none"> • Current shareholders represent risks to strategic investors 	<ul style="list-style-type: none"> • Create legal mandate for minorities to sell shares • Offer exit opportunities
Deposit Requirement	<ul style="list-style-type: none"> • Deposit 20% of target price (UAH) in local bank at owners expense 	<ul style="list-style-type: none"> • Large risk for investors, defies industry standard 	<ul style="list-style-type: none"> • Replace with bid bond or smaller deposit, allow rated international banks
Foreign Currency Repatriation	<ul style="list-style-type: none"> • Emergency restrictions on currency repatriation 	<ul style="list-style-type: none"> • Limits profitability of investments for foreign investors 	<ul style="list-style-type: none"> • Remove emergency restrictions or clarify timing for lifting
AMC and NEURC roles in transaction	<ul style="list-style-type: none"> • AMC approval can take up to 3 months, but needed prior to bid day 	<ul style="list-style-type: none"> • Investors prepare AMC approval ahead of tender window, lose bid bond and tender if not granted 	<ul style="list-style-type: none"> • Commitment from AMC to review applications well before auction date
Dispute Arbitration	<ul style="list-style-type: none"> • Ukrainian law does not allow for offshore dispute arbitration 	<ul style="list-style-type: none"> • Represents additional risk to international investors, defies industry standard 	<ul style="list-style-type: none"> • Allow for international arbitration in share purchase agreement
Electricity Law and NEURC Law	<ul style="list-style-type: none"> • VR is drafting new legislation to substantially reform the marketplace and regulations 	<ul style="list-style-type: none"> • Tariff and offtake changes cannot be factored into valuation at this point 	<ul style="list-style-type: none"> • Pass primary and secondary legislation predictably, sends positive signal to investors

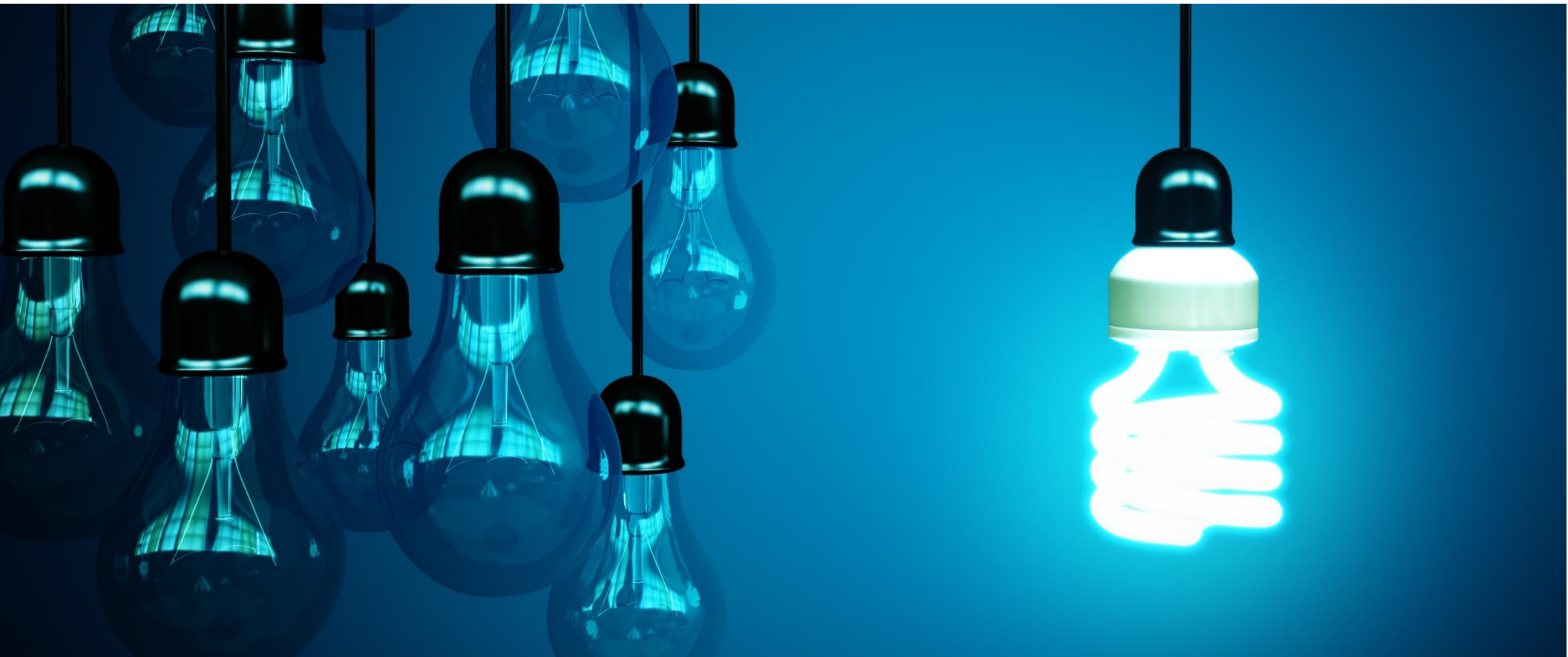
Progress towards Recommendations

The GOU is taking or has already taken steps towards implementing the following recommendations

Issue	Recommendation	Proposed Action	Impact of Proposed Action	Status of Proposed Action
Limitations on Buyers	Enact removal of restriction as part of share sale law change	New Privatization Law	Restriction on foreign-government-owned entities from non-aggressors removed	Approved and signed into Law. Law is effective starting from March 6, 2016
Dispute Arbitration	Allow for foreign arbitration for power investors	New Privatization Law	Disputes can be resolved in Stockholm or other agreed-upon arbitration court	Approved and signed into Law. Law is effective starting from March 6, 2016
Electricity Law	Pass primary and secondary legislation predictably	New Electricity Law	Will create the foundation for the new electricity market	On March 2, 2016 the draft law was approved by the Cabinet of Ministers, awaiting submission to the Rada.
NEURC Law	Pass primary and secondary legislation predictably	NEURC Law	Will provide legal foundation for electricity regulator	Draft law registered with the Parliament on 19 February 2016 under No. 2966-D
Deposit Requirement	Replace with bid bond, allow rated foreign banks	SPFU Order	SPFU seeks to establish 5% bid deposit for group G and 20% for group B entities	Draft order published on SPFU website, has not been adopted as bylaw
Foreign Currency Repatriation	Remove emergency restrictions or clarify timing for lifting	National Bank of Ukraine announce that it will allow the restriction to expire.	Currency control restrictions have been recently prolonged until June 9, 2016	Currency controls will be reviewed again by The National Bank of Ukraine prior to June 9

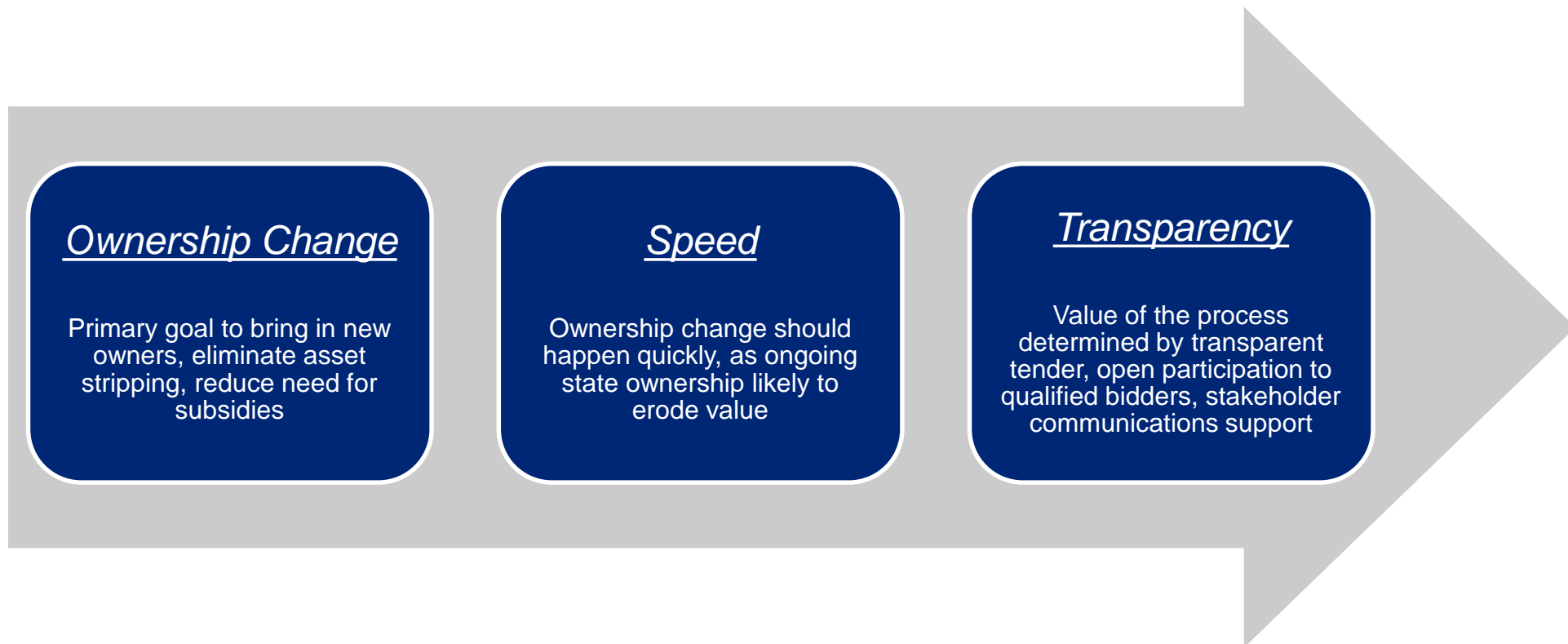
Section 3:

Strategy and Privatization Work Plan



Goals of Privatization

GOU/SPFU objectives are to privatize through an expedient, and transparent process, to qualified investors



Generating high valuations is a secondary goal under an accelerated privatization timeline

Strategy to Accomplish Privatization Goals

Mitigation actions can ensure that privatization achieves GOU/SPFU objectives

Mitigation Action	Rationale
Further due diligence prior to auction date	Provides full information for potential bidders which identifies risks
Forensics Review	Facilitates open, transparent process enhances value, reduces “buyers” risk, and increases pool of potential buyers.
Communications Support	Unifies GOU messaging, creates transparency and openness, increases pool of potential buyers,
Prequalification Procedures	Prequalification can ensure bidders are technically-qualified and serious about value creation
Capacity building to NEURC	A fully functioning NEURC is essential for the sector to reap long-term benefits from privatization









Ownership Change

Speed

Transparency





Issues impacting transaction probability and valuation (1/3)

Common themes identified at each Oblenergo have potential to impact Oblenergo valuation or interrupt privatization process




Key Issue	Expected Impact on Valuation	Ability to Interrupt Progress	Explanation	Mitigation Action
Poor Asset Condition			<ul style="list-style-type: none"> Cash flow problems and lack of adequate ROI have impeded the Oblenergos' ability to execute capital investment programs Aging asset condition signals need for investment from new management and will drive down valuations 	<ul style="list-style-type: none"> SPFU governance plan in transition Preset investment requirements
Management	 to 		<ul style="list-style-type: none"> Management plays an important role in transition, can either support or oppose process in ways that have valuable or detrimental impacts 	<ul style="list-style-type: none"> Incentive plan More active SPFU oversight of decision making
Major customers' stability	 to 		<ul style="list-style-type: none"> Major industrial customers are enduring a volatile, downward macroeconomic trend in Ukrainian manufacturing and industry Unpaid bills from major customers decrease enterprise value Accounting irregularities and potential ownership conflicts between large customers may create legal/financial difficulties during/after privatization 	<ul style="list-style-type: none"> Forensics Review Require SPFU approval of major business transactions in advance

Key:

Valuation Impact










-  — Strong positive impact
-  — Marginal positive impact
-  — Marginal negative impact
-  — Strong negative impact

Progress Impact

-  — High potential to interrupt progress
-  — Medium potential to interrupt progress
-  — Low potential to interrupt progress





Issues impacting transaction probability and valuation (2/3)

Common themes identified at each Oblenergo have potential to significantly impact enterprise valuation or interrupt privatization process




Key Issue	Expected Impact on Valuation	Ability to Interrupt Progress	Explanation	Mitigation Action
Outstanding Legal Concerns	 to 		<ul style="list-style-type: none"> All Oblenergos minimally impacted by legal risk of sole jurisdiction Oblenergos may have ongoing legal issues with GOU, customers, or suppliers that can significantly impact enterprise value or interrupt progress 	<ul style="list-style-type: none"> License clarifications Privatization plan language
Receivables / Working Capital Flow			<ul style="list-style-type: none"> Major unpaid bills from large industrial customers diminish enterprise value Receivables unlikely to have material impact on progress of privatization, but will impact valuations if uncollectable 	<ul style="list-style-type: none"> Vendor/Legal due diligence SPFU governance plan
Outstanding Debts / Payables			<ul style="list-style-type: none"> Unpaid debts to Energorynok (and consequent NEURC regulations) restrict oblenergo's ability to utilize cashflow, diminish enterprise value Debtors may lay claim to collateral or future cash flows Forensic reviews and active SPFU governance needed to protect investors from unknown liabilities 	<ul style="list-style-type: none"> Vendor/Legal due diligence SPFU governance plan
Stakeholder Opposition			<ul style="list-style-type: none"> NEURC could block process by not issuing license transfer Current minority shareholders may find legal ways to impede progress Labor force opposition may diminish political will or create operational or financial risks for new ownership 	<ul style="list-style-type: none"> Communications Support to SPFU Capacity building to SPFU

Key:

Valuation Impact







-  — Strong positive impact
-  — Marginal positive impact
-  — Marginal negative impact
-  — Strong negative impact

Progress Impact

-  — High potential to interrupt progress
-  — Medium potential to interrupt progress
-  — Low potential to interrupt progress





Issues impacting transaction probability and valuation (3/3)

Common themes identified at each Oblenergo have potential to significantly impact enterprise valuation or interrupt privatization process




Key Issue	Expected Impact on Valuation	Ability to Interrupt Progress	Explanation	Mitigation Action
Political Support			<ul style="list-style-type: none"> Oblast-level politicians may agitate labor force or use legal impediments to slow privatization process Concerns already emerging about elites dividing up Oblenergos, limiting competitive bidding 	<ul style="list-style-type: none"> Transparency Communications Support to SPFU
Market Law Changes			<ul style="list-style-type: none"> Implementation of new market rules will change Oblenergo's core business Need for post-privatization corporate restructuring to separate biz. units NEURC transparency plus Oblenergo's adaptability will determine outcomes 	<ul style="list-style-type: none"> Capacity building to NEURC
Progress Towards Incentive Tariffs			<ul style="list-style-type: none"> Incentive-based tariff scheme has the greatest ability to ensure investor ROI in the short-medium term and would be important for new investors Filing for the tariff includes need for call center, approved investment plan, debt settlement with Energorynok, valuation report and technical standards Cost of application, uncertainty of acceptance deterrent for Oblenergos 	<ul style="list-style-type: none"> Privatization Plan Capacity building to NEURC

Key:

Valuation Impact

-  — Strong positive impact
-  — Marginal positive impact
-  — Marginal negative impact
-  — Strong negative impact

Progress Impact

-  — High potential to interrupt progress
-  — Medium potential to interrupt progress
-  — Low potential to interrupt progress

Summary of Oblenergo Findings

Specific Risks and Concerns

	Asset Conditions	Management	Major Customers	Legal Concerns	Receivables	Debts / Payables	Stakeholders	Political Support	Market Changes	Incentive Tariff	Leading Concerns
KhmelnitskOE	Low Risk	Low Risk	Med. Risk	Low Risk	Low Risk	Med. Risk	Med. Risk	Low Risk	Low Risk	Low Risk	<ul style="list-style-type: none"> • Customer base is majority residential • Several industrial customers in region closed due to trading sanctions with Russia, but capacity exists for growth
TernopilOE	High Risk	Med. Risk	Med. Risk	Med. Risk	Low Risk	Med. Risk	Med. Risk	Low Risk	Med. Risk	Med. Risk	<ul style="list-style-type: none"> • Small, limited growth potential • Customer base is largely residential • Tired assets, old technology systems
KharkivOE	Med. Risk	Low Risk	High Risk	High Risk	High Risk	High Risk	Med. Risk	High Risk	High Risk	Med. Risk	<ul style="list-style-type: none"> • Unpaid bills from largest customer • Privatization may face political opposition from mayor and oblast • Recession in east, political challenges
MykolaivOE	High Risk	Med. Risk	High Risk	High Risk	Low Risk	High Risk	Med. Risk	Med. Risk	Med. Risk	High Risk	<ul style="list-style-type: none"> • Anchor industrial customers in decline • Liabilities for court fines • Missing land titles for small hydro assets
CherkassyOE	Med. Risk	High Risk	High Risk	High Risk	High Risk	Med. Risk	High Risk	Med. Risk	Med. Risk	High Risk	<ul style="list-style-type: none"> • In formal bankruptcy proceedings • In lawsuit with minority shareholder • Largest customer not paying • Significant bad debts from local industry
ZaporozhyaOE	High Risk	High Risk	High Risk	High Risk	High Risk	High Risk	Med. Risk	Med. Risk	High Risk	Med. Risk	<ul style="list-style-type: none"> • Allegations of improper sales of AP • 3 large industrial customers account for 50% of load. Each is in decline • High risk of customer flight in new market

Execution Plan for Sale of Oblenergos

Sequencing strategy for Oblenergo privatization

	Group 1	Group 2	Group 3
Oblenergos	KhmelnitskOE, TernopilOE	KharkivOE*, MykolaivOE*	ZaporozhyaOE*, CherkassyOE <i>*(possible combination with Centrenergo, see next slide)</i>
Timeline	8 Mos.	10 Mos.	11 Mos.
Justification	<ul style="list-style-type: none"> • Most prepared for privatization. • Size and lack of asset stripping will speed due diligence • Geography and perception better perceived by investors. • Strong management and service orientation at Khmelnytsky • Highest potential for bundling 	<ul style="list-style-type: none"> • Large, stable company, but size and profile of the company demands further due-diligence. • Likely the highest-value Oblenergo based on valuation methodology 	<ul style="list-style-type: none"> • Legal and accounting irregularities already identified, needs further DD and cleanup prior to sale • Need an SPFU governance plan for interim • Unclear on management and local political support
Key Focus Areas	<ul style="list-style-type: none"> • Approval on changes to Plan, prequal, bid criteria, timing • Crucial to establish a predictable, repeatable process • Need stakeholder buy-in from all Oblenergos before start 	<ul style="list-style-type: none"> • Local political buy-in likely to be critical for Kharkiv. • Political uncertainty may deter bidders 	<ul style="list-style-type: none"> • Transparency in financial reviews and public communications during privatization.

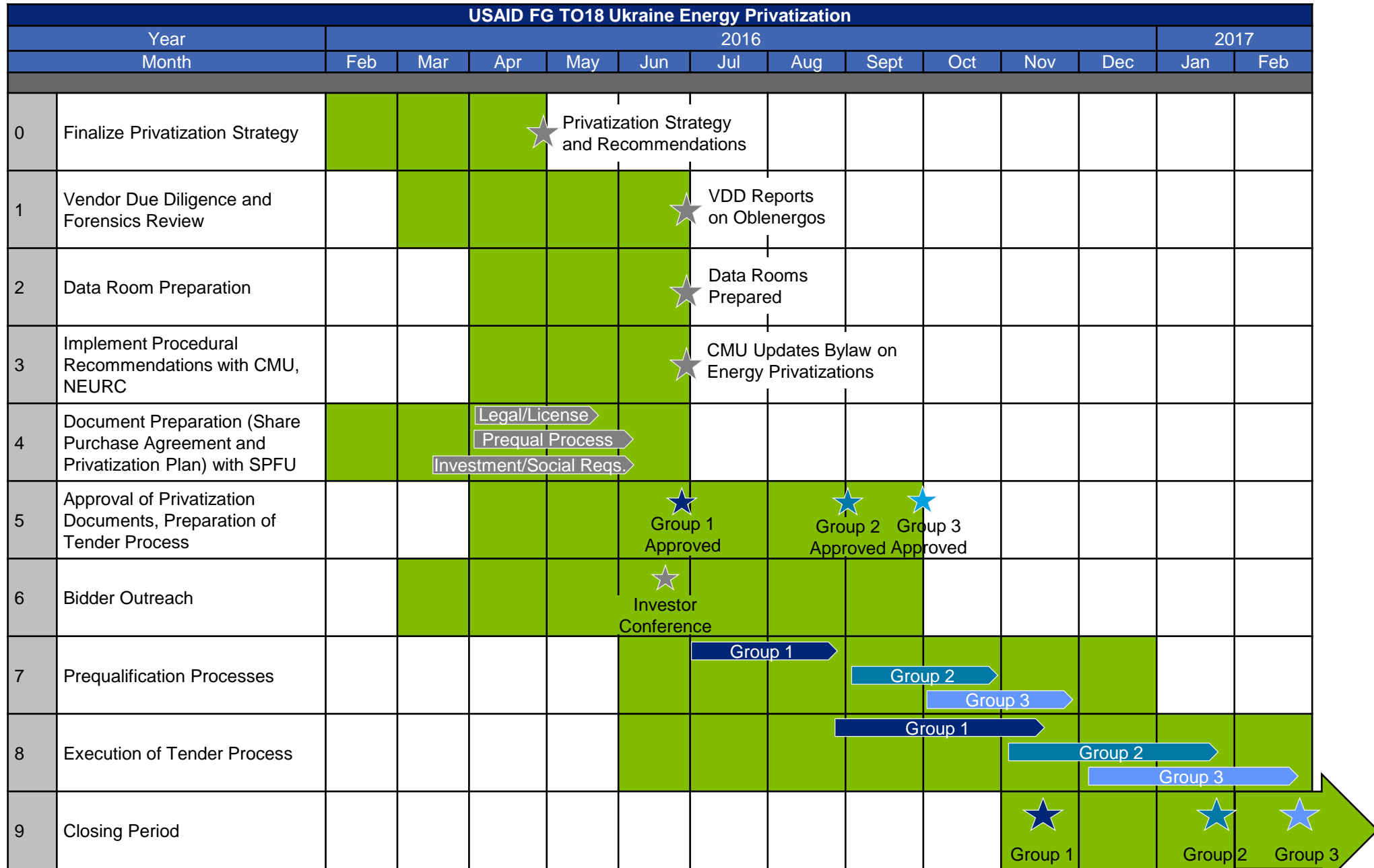
Review of alternative transaction structures

Multiple privatization methods were examined, including the following options

Strategy Option	Pros	Cons	Rationale for Elimination
Management Contract	<ul style="list-style-type: none"> Allows time for management and operational improvements to increase value Allows time to clean up accounting and legal issues May allow time for passage of new Electricity Law and market changes 	<ul style="list-style-type: none"> Negative past experiences with management contracts in Ukraine Does not meet GoU's privatization timetable. 	<ul style="list-style-type: none"> Does not meet GoU's privatization timetable.
Privatize all 6 Oblenergos simultaneously	<ul style="list-style-type: none"> Expedites private ownership in electricity sector. Accelerates removal of assets from state budget. 	<ul style="list-style-type: none"> Constrains buyer due diligence timeframe may lead to reduced or limited buyer pool; Stretches limited resources to manage privatization process. 	<ul style="list-style-type: none"> Straining SPFU resources increases likelihood of missed deadlines and disorganized signaling to market
Asset Lease, Long term concession	<ul style="list-style-type: none"> Introduces different pool of international operators and bidders Can lead to new investment capital and improved efficiency if structured properly 	<ul style="list-style-type: none"> State ownership still in place Requires CMU 271 changes Doesn't meet SPFU's privatization objectives Difficult under current market and tariff structure 	<ul style="list-style-type: none"> Doesn't meet overall SPFU objectives May have some appeal for 1-2 Oblenergos
Bundling: Centrenergo with Zaporozhya (possibly other oblenergos)	<ul style="list-style-type: none"> Likely brings other investors into distribution pool Has successfully been achieved in other markets Mitigates risks of industrial customer defections in new market structure 	<ul style="list-style-type: none"> Requires CMU 271 changes Constrains buyer due diligence timeframe based on Centrenergo timeframe 	<ul style="list-style-type: none"> May promote "flawed" process and extend timeline. Centrenergo due diligence is unknown

See Appendix B: Best Practices in Power Market Ownership Transformation for Case Studies

Execution Timeline for Privatization Overview



Preliminary Buyer Sounding

Deloitte began conversations with potential bidders¹:

Domestic Investors Screened

- DTEK
- ERU
- MHP
- Volynoblenergo

1. This list represents a preliminary market sounding and does not convey definitive bidder interest or the limit of potential bidders in individual oblenergos.

International Investors Screened

- AES (US)
- CEZ* (Czech Republic)
- Energa SA* (Poland)
- Energo Pro (Czech, Bulgaria, Georgia)
- Kulczyk Investments (Poland)
- Lietuvos Energija* (Lithuania)
- PGE SA* (Poland)
- RWE* (Germany)
- Tauron SA* (Poland)
- Toshiba (Japan)
- TEPCO* (Japan)
- Vattenfall* (Sweden)
- Representatives of Indian, UK, and Thai investment companies

**Indicates 25% or greater owned by foreign government*

Preliminary Buyer Sounding

Comments from prospective buyers

General Comments:

- Foreign investors familiar with Ukraine indicated **15-17% as a minimum rate of return on equity** to attract them to take risks inherent to Ukrainian market
- Foreign investors indicated they would likely raise **unsecured debt from international capital markets to finance in-country investments**, given Ukraine's high borrowing costs
- Investors want to know clearly the **level of investments needed to modernize** the companies
- Foreign investors with knowledge of Ukraine cited **concerns over non-transparency, foreign currency restrictions, and rule of law** as fundamental barriers to entry
- Few international investors have specifically targeted the Ukraine energy sector for near term investment; thus, privatization opportunities will need to be actively marketed to bidders to create interest

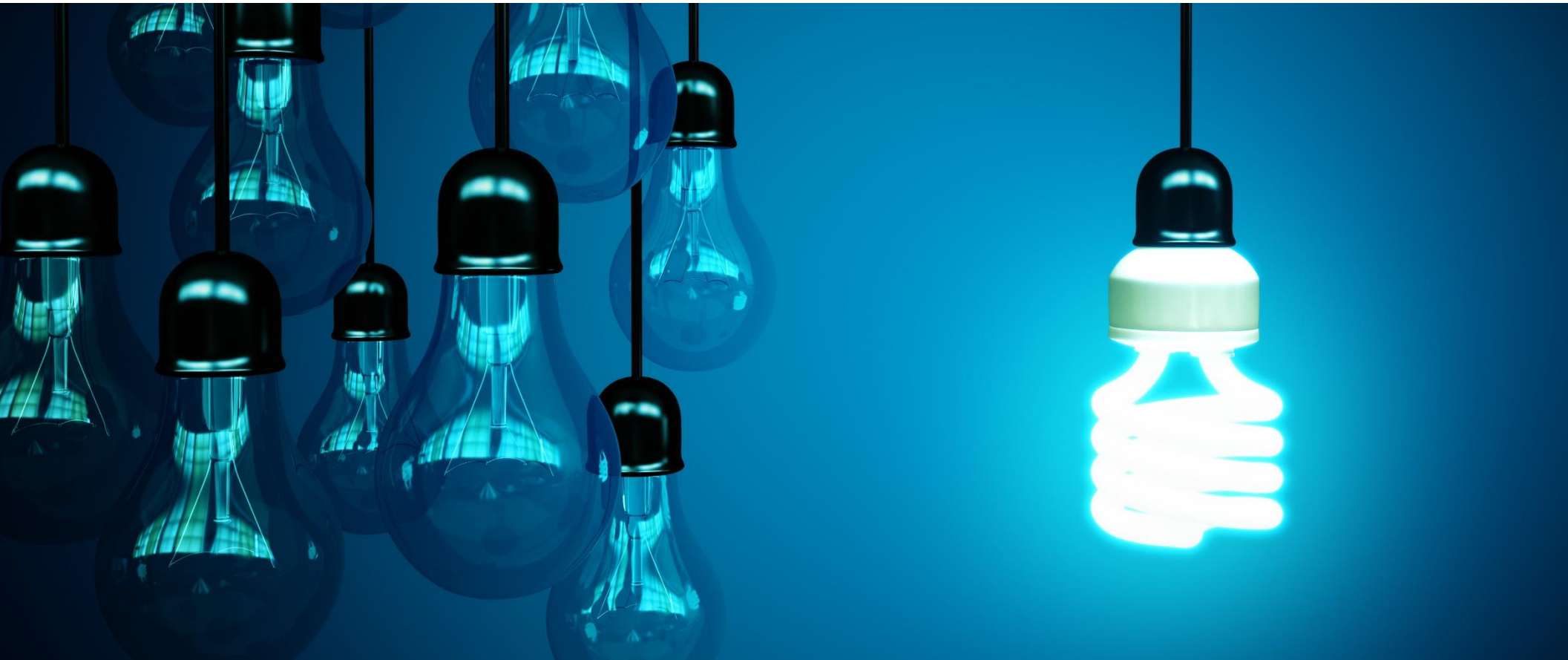
By Region:

- German (RWE) and Polish government-owned companies are going through significant changes in their corporate governance structures, which creates timing difficulties for looking at new investments
- Indian and Asian buyers expressed more interest to invest in thermal generation and more openness to Ukraine as an investment market
- Energo Pro is currently selling their Georgia distribution utility, which may indicate potential Ukraine bidders
- Polish companies expressed some interest in western Ukraine oblenergos, but not in eastern regions
- Ukrainian investors cautious given current economic climate

Market exists, but proper market sounding through an investor conference and public announcement campaign will be needed to get firm commitments

Appendix A:

Ukraine Electricity Market Structure

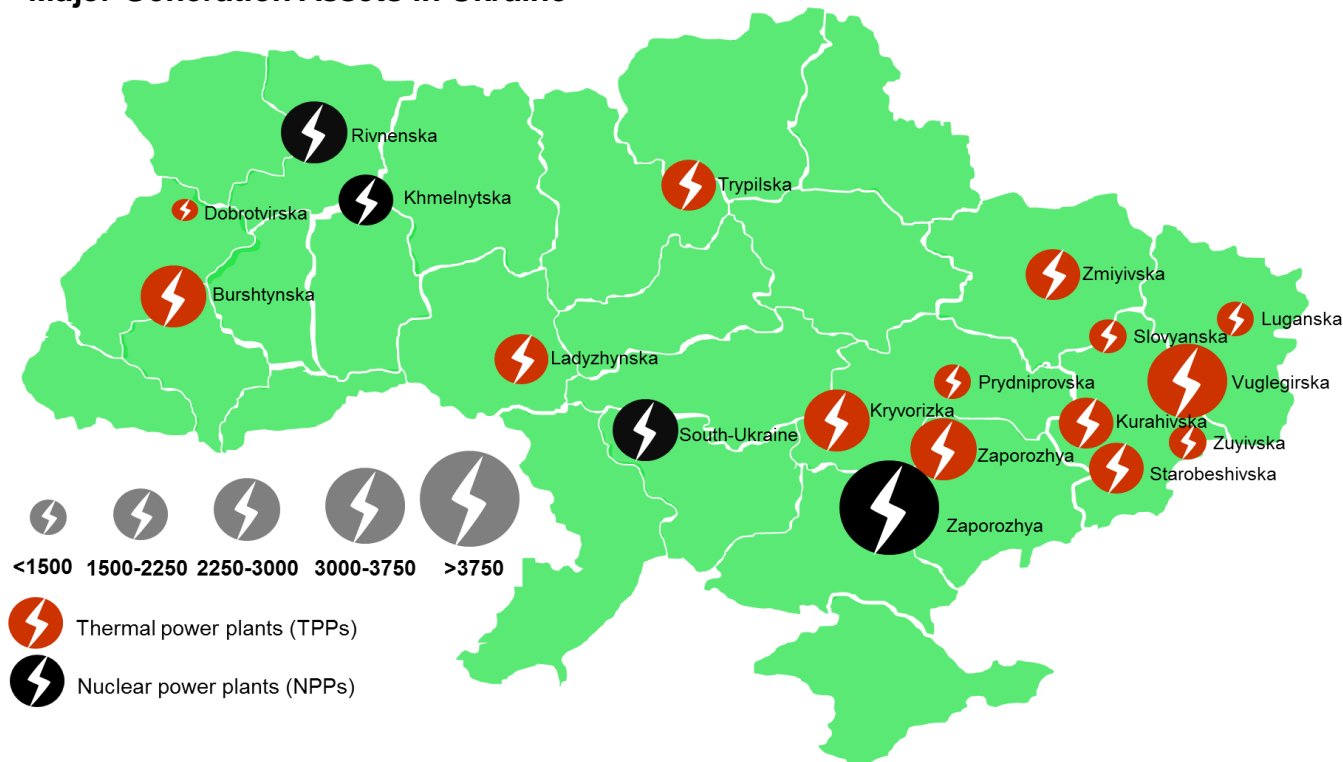


Electricity Sector Overview

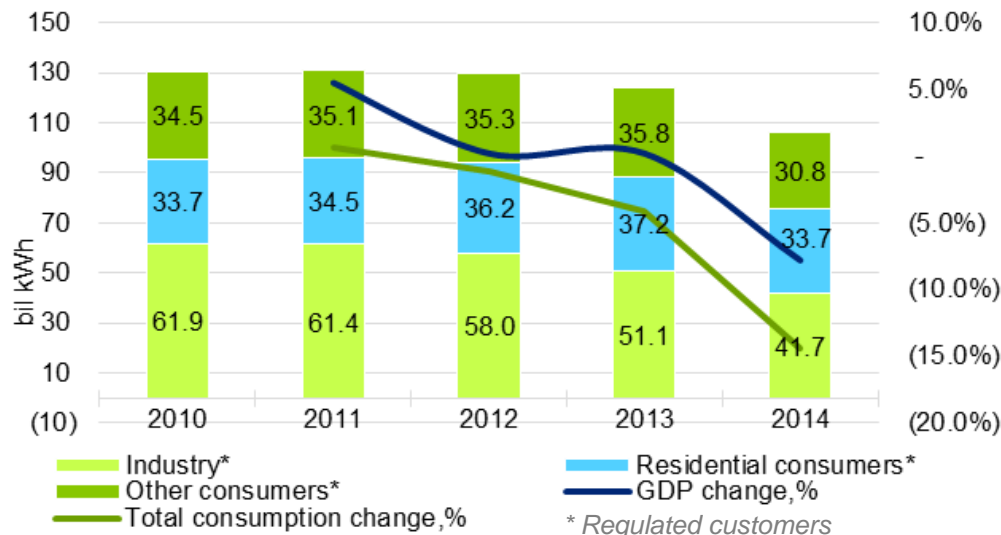
2015 Market Facts and Figures

- Ukraine produced 143.16 bil kWh, consumed 107.98 bil kWh and exported 3.32 bil kWh.
- Population of Ukraine (without Crimea) 42.8 mln (est.)
- Industrial consumption accounts for 42% (50.1 bil kWh), mainly from steel, chemical and mechanical engineering enterprises.
- Household consumption amounted for 31% (36.2 bil kWh). Consumption per capita reached 845.8 kWh.
- Energy consumption has decreased for 4 consecutive years with economy

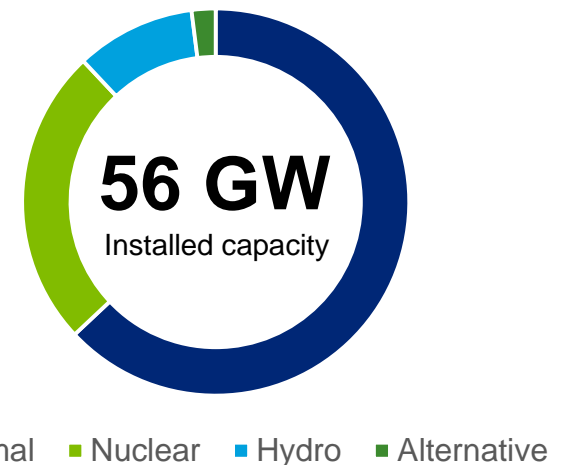
Major Generation Assets in Ukraine



Electricity Consumption in Ukraine, GWh



Generation Mix in Ukraine, % of Total Capacity



Sources: NEURC, Energoatom, DTEK

Legislation and Governance in Electricity Sector

Enabling Legislation

LAWS OF UKRAINE

- “On natural monopolies” dated 20.04.2000 No. 1682-III
- “On the principles of operation electricity market of Ukraine” dated 24.10.2013 No. 663-VII
- “On electricity” dated 16.10.1997 No. 575/97-BP
- “On combined production of electric and heat energy (co-generation) and the use of rejected energy potential” dated 05.04.2005 No. 2509-IV
- “On state regulation of utilities” dated 09.07.2010 No. 2479-VI

BY-LAWS

- Decree Of The President Of Ukraine “On approval of the Regulation on the National Commission, which performs state regulation in the energy and utilities” dated 10.09.2014 No. 715/2014
- Resolution of the Cabinet of Ministers of Ukraine “On criteria for assessing the risk from business activities subject to licensing by the National Commission, which performs state regulation in the energy and utilities, and determined the regularity of state supervision (control)” dated 05.08.2015 No. 565
- Resolution of the Cabinet of Ministers of Ukraine Regulation “On the rights of the national executive authorities and of executive departments of local authorities in the field of prices (tariff) regulation” dated 25.12.1996 No. 1548
- Resolution of the Cabinet of Ministers of Ukraine “On approval of the Regulation on state control in electrical energy sector” dated 15.02.1999 № 189
- Regulation of the National Commission for Electricity of Ukraine “On approval of the Rules and Conditions of business for the supply of electricity by regional (local) electrical grids” dated 13.06.1996 No. 15
- Regulation of the National Commission for Electricity of Ukraine “On approval of the Rules and Conditions of business for the supply of electricity at regulated tariffs” dated 13.06.1996 No. 15/1
- Resolution of the Cabinet of Ministers of Ukraine “On ensuring a unified approach to the formation of tariffs for housing services” dated 01.06.2011 No. 869

Legislation and Governance in Electricity Sector

Licensing of Electricity Sector Activities

In order to perform activity on supply of electricity, the companies shall possess the following licenses issued by NEURC:

- License for distribution of electrical energy (transmission of electrical energy with regional (local) electrical grids)
- License for supply of electrical energy under regulated tariff

Licenses' terms of validity are set by NEURC with a minimum of 3 year duration, and no limits on length of term or need for renewals.

Licenses are not exclusive, but allow for monopoly use of electricity supply assets 220 KV and below.

NB In case of liquidation, reorganization, merger, participation in unions, purchasing or alienation of over 25% of licensee's shares, the latter shall apply to the NEURC for determination of compliance of such actions with the License Rules and Conditions.

Name of target entity	License for distribution of electrical energy (transmission of electricity regional (local) electrical grids)	License for supply of electrical energy under regulated tariff
No. of license, date of issuance		
PJSC "Zaporozhyaoblenergo"	AB177341, 19.09.1996	AB177342, 19.09.1996
OJSC "Ternopiloblenergo"	AB220529, 19.09.1996	AB220530, 09.10.1996
JSC "Kharkivoblenergo"	AB399829, 19.09.1996	AB399830, 19.09.1996
PJSC "Khmelnitskoblenergo"	AG500331, 28.04.2011	AG500332, 28.04.2011
PJSC "Cherkassyoblenergo"	AG578508, 19.09.1996	AG578507, 24.09.1996
PJSC "Mykolaivoblenergo"	AG500343, 19.09.1996	AG500344, 09.10.1996

Legislation and Governance in Electricity Sector

Government Institutions

Ministry of Energy and Coal Industry

General responsibilities in regulation of WEM:

- Defines development directions of energy market;
- Forms country's overall forecasted energy balance;
- Incorporates and controls entity, which is engaged in managing and dispatching activities of WEM (State owned entity Ukrenergo);
- Incorporates and controls entity, which is engaged in managing of the Ukrainian nuclear and hydro PPs, and is responsible for nuclear security of the country.
- Prime Minister nominates Minister, who is approved by Verkhovna Rada

Responsibilities, related to tariff setting:

- Confirms CAPEX values for PPs, used in calculations of generating tariffs and WEM prices;
- Defines standards of fuel usage for electricity generation for PPs, used in calculation of generating tariffs and WEM prices.

National Commission for Energy and Utility Services State Regulation (NEURC)

General responsibilities in regulation of WEM:

- Reconciles the interest of suppliers, consumer and Government;
- Ensure the transparency, competition and openness at the market of natural monopolists and related market of electricity, heating, and water supply;
- Retains government control over the market of natural monopoly;
- Licenses participants of the WEM;
- Sets guidance and standards for electricity power usage;
- Participates in payments flows on the WEM.
- Chairman of NEURC is nominated by President
- Monitors and issues annual report on electricity market

Responsibilities, related to tariff setting:

- Sets maximum price for electricity on WEM;
- Sets tariffs on distribution and transmission of electricity and electricity price for end consumers.

Current Market Mapping, Subsidies and Liquidity

Market Operations

SOE Energorynok

- Acts as the single buyer of electricity from generating companies on the WEM, and single seller of electricity to distribution companies;
- Calculates hourly electricity wholesale prices, provides forecasts for the next day's prices;
- Accounts for flows of electric power;
- Controls operations and funds of WEM;

SOE Ukrenergo

- Transmits power from generation companies, purchased by Energorynok, to be sold to Oblenergos
- Operates electricity transmission via backbone and interstate power grids;
- Repairs and maintains backbone power grids;
- Provides information and technical support of the WEM operation.

Generation Companies

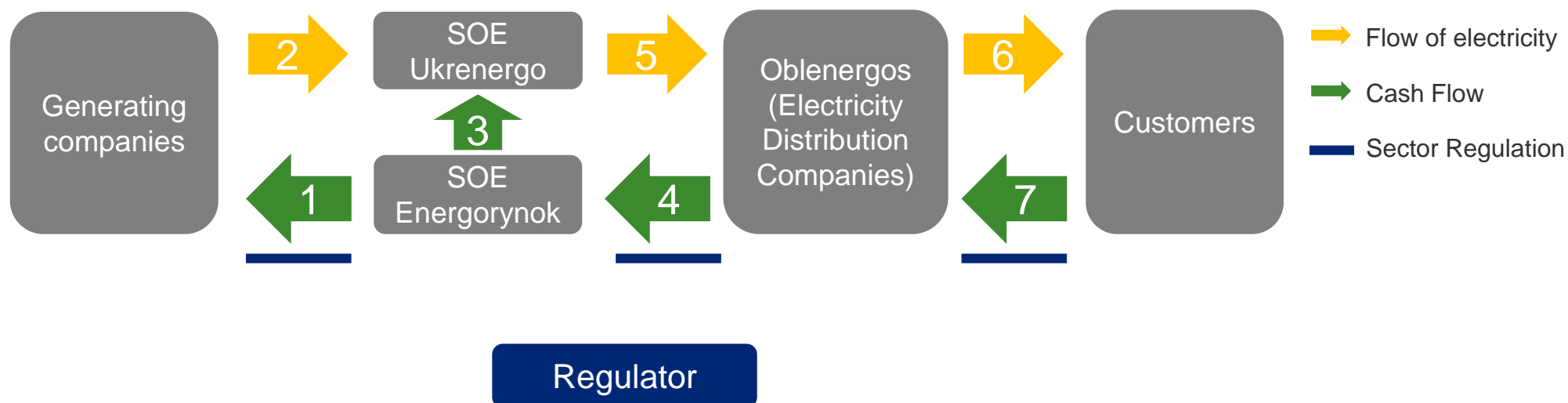
- All nuclear power, hydropower, and 25% of thermal generation are state-owned. Alternative energy and 75% of thermal generation is privately owned.
- Generation Companies each hold a contract to sell electricity to Energorynok
- Sales to WEM is determined in accordance with the load schedule (nominated hourly, 24-hours ahead)
- Energorynok pays daily fees to the generation in proportion of commercial output of the previous day

Oblenergos (Distribution Companies)

- Each Oblenergo holds contract for supply from Energorynok
- Oblenergos nominate power demand on a monthly schedule and settle payments for power day-ahead
- Oblenergos hold supply contracts with customers (with maximum consumption per customer class)
- Customers pay Oblenergos through large Ukrainian retail banks or bill collection agencies
- Collectors/bank automatically transfer Oblenergo's payment to Energorynok based on algorithm set by NEURC

Current Market Mapping, Subsidies and Liquidity

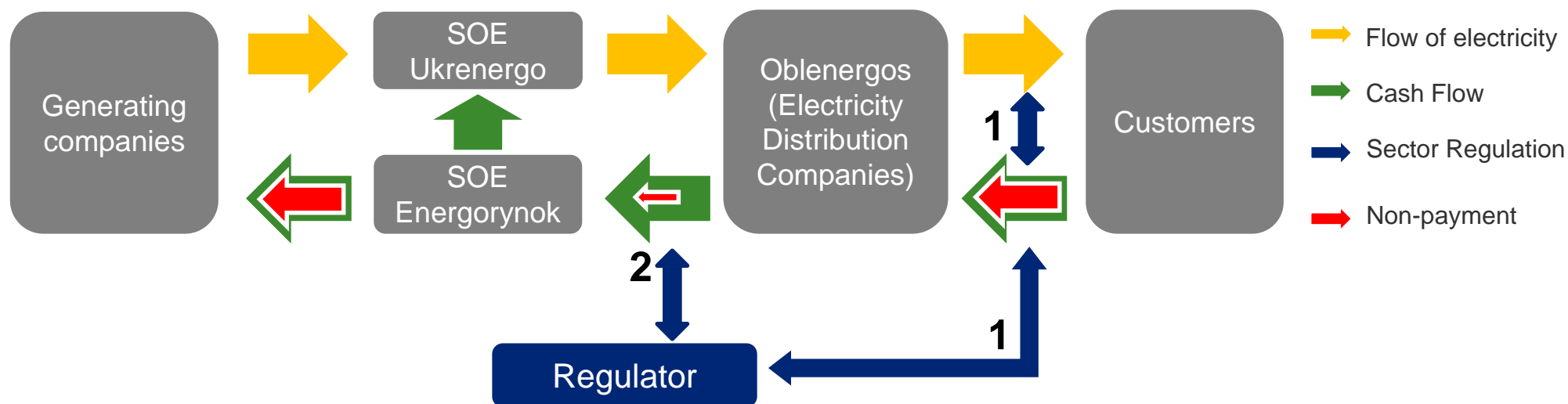
Cash and Electricity Flows



- 1) SOE Energorynok's payments to generating companies (tariffs to generators regulated by NEURC)
- 2) Electricity power is transmitted via backbone and interstate power grids of SOE Ukrenergo
- 3) SOE Energorynok's payments for transmission and dispatching of SOE Ukrenergo
- 4) Distribution companies purchase electric power from SOE Energorynok (Tariffs regulated by NEURC)
- 5) Electricity is transmitted via SOE Ukrenergo facilities
- 6) Distribution companies distribute electric power to end consumers
- 7) Consumers' payment for consumed power with distribution companies (Tariffs regulated by NEURC)

Current Market Mapping, Subsidies and Liquidity

Subsidy and Illiquidity



1 – Subsidy Certificates

- Residential tariffs are lower than the cost of electricity service.
- Oblenergos estimate the subsidy amount based on monthly energy consumption of residential consumers.
- NEURC reads and approves consumption data monthly.
- Approved amounts used in calculating industrial tariffs, which are recalculated each month to include the updated subsidy amount.
- NEURC published a tariff schedule for 2015-2017 and, so far, has upheld its commitments to raise tariffs. It is expected that during 2016 – 2017 the tariff for residential consumers will gradually increase towards cost recovery level, thus reducing the tariff for the rest of non-residential consumers.

2 - Liquidity Issues

- Large industrial and commercial customers have been delaying payments to Oblenergos (as a result of economic downturn, trade re-alignment, and violent conflict).
- Resulting delays have caused Oblenergos to fall behind on payments to Energorynok,
- Energorynok is then unable to pay generators for supply. Generators are then unable to pay fuel suppliers.
- To improve cash collection among Oblenergos, the regulator has removed the ability for Oblenergos to finance debt service from tariff buildup by prohibiting inclusion of debt service in the tariff buildup and has instituted that all payments received by Oblenergos go first towards Energorynok by instituting the “0 Algorithm” which automatically diverts cash from operations from Oblenergos’ collection accounts to Energorynok.

Tariff-Setting Procedures and Incentive Tariffs

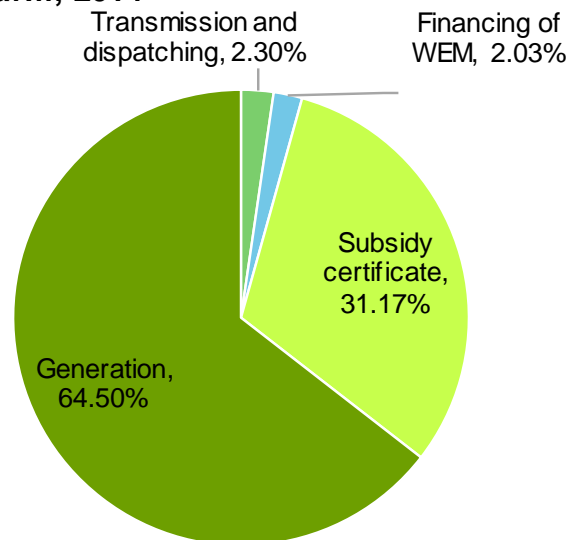
Retail and Wholesale Tariffs

- The market consists of sales at regulated and non-regulated tariffs.
- **Non-regulated tariffs (21.6% of all purchases):** Electricity exports and sales to some large commercial end users.
- **Regulated tariffs (78.4% of all purchases):** NEURC sets tariffs for both **wholesale (purchase from generators)** and **retail (sale to end consumers)**

Wholesale:

Purchase from Generators

Structure of the wholesales electricity market tariff, 2014

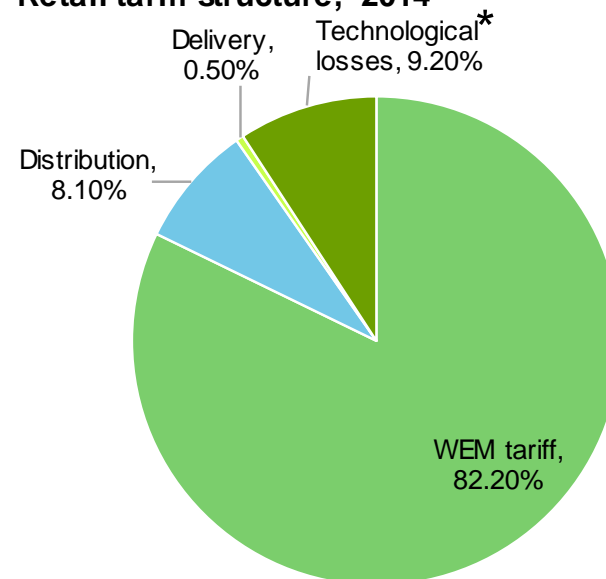


- Estimated and approved by NEURC on a monthly basis.
- Subsidy certificates (31%) are for cross-subsidy (policy of high industrial tariffs offsetting low residential tariffs)

Retail:

Sales to End-Users

Retail tariff structure, 2014



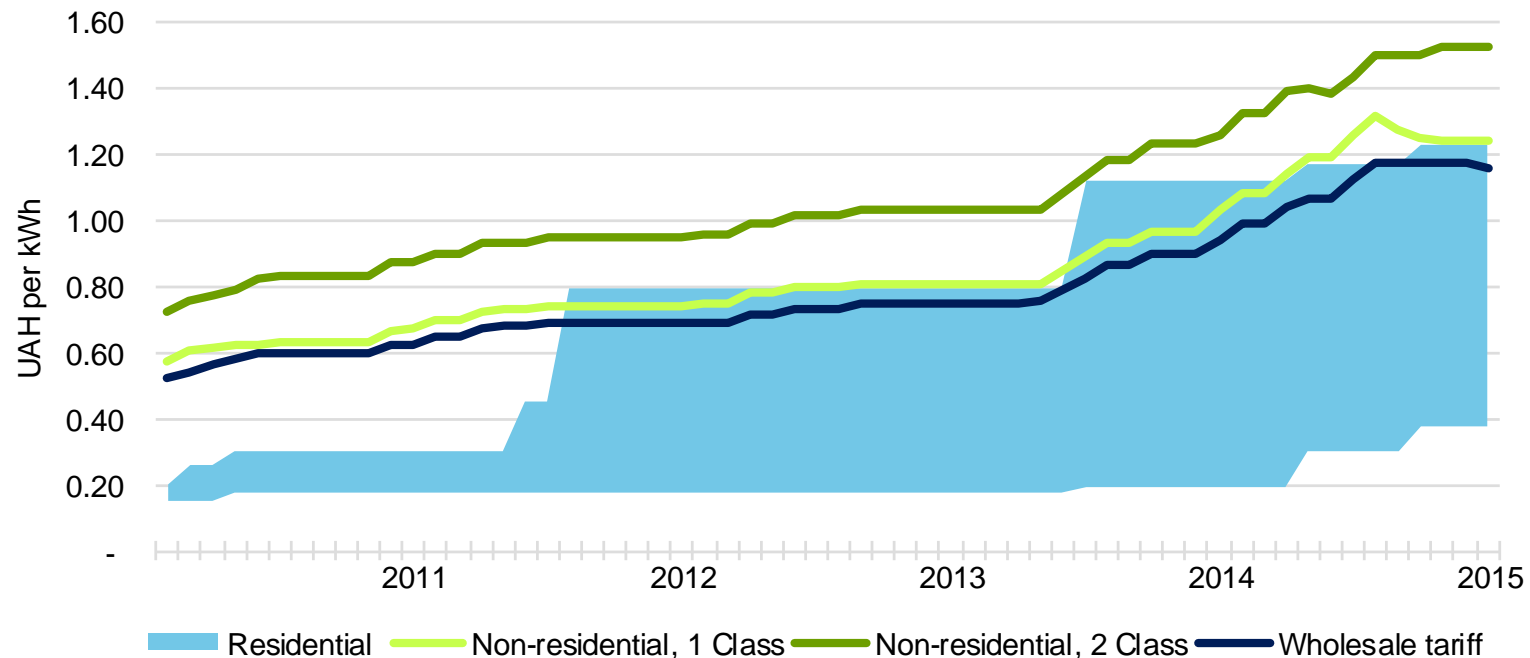
* Technological losses includes only distribution

- Approved by NEURC on a multi-year basis and reviewed annually
- The last two components relate to the service payments to distribution companies which are subject to NEURC regulation based on company's operating expenses and capital expenditures (investment program).

Tariff-Setting Procedures and Incentive Tariffs

Historical Tariff Rates

Electricity tariffs in Ukraine



Source: NEURC

Non-Residential tariffs

- The non-residential tariff is reviewed and set monthly as weighted average of the respective tariffs for each distribution company.
- Subdivided further into two classes (groups) subject for electricity voltage: 1 class – 27.5 kV and higher, 2 class - below 27.5 kV.
- Cross-subsidy in the market appears from the non-residential tariff being significantly higher per kWh than residential tariffs

Residential group tariffs

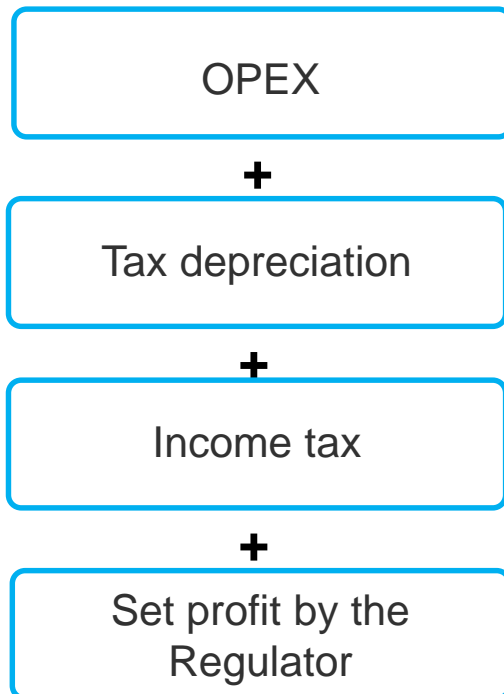
- Dependent on the monthly electricity quantity consumed, urban/rural residence, etc. Residential tariff in Ukraine is below the total cost of electricity service
- NEURC set residential tariffs for a long-term period starting from April 2015 without specifying the next review date.
- Gradual increase for residential tariffs scheduled until March 2017 and with a stable tariff onward.

Tariff-Setting Procedures and Incentive Tariffs

Transition to new incentive tariff formulation

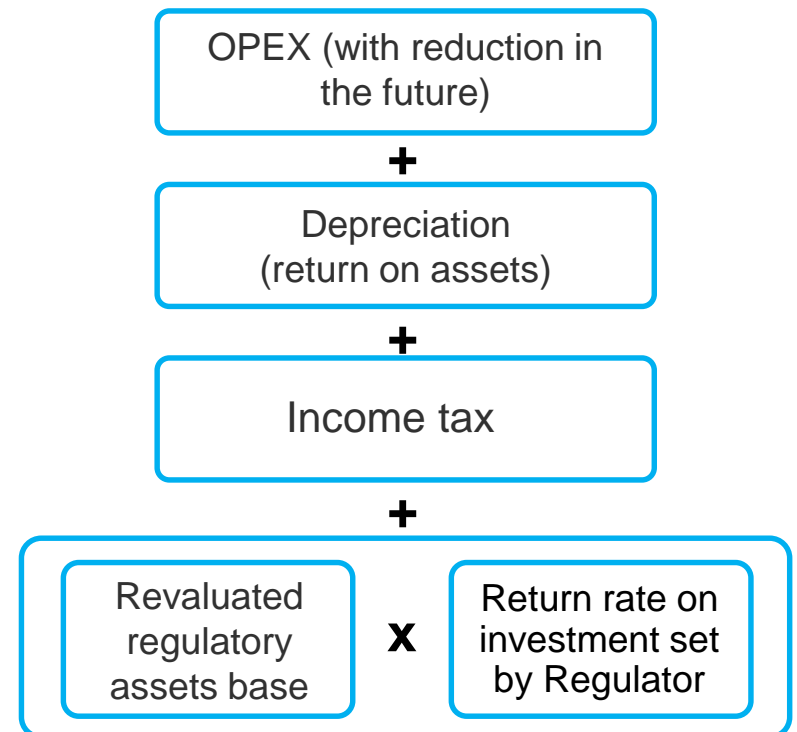
Existing tariff structure

Needed revenue of the Oblenergo is based on the «cost-plus» principle



New tariff structure

Needed revenue of the Oblenergo is based on the return on the regulatory asset base



NEURC instituted new incentive-based tariffs to spur new investments in an Oblenergo's regulatory asset base in 2013

Tariff-Setting Procedures and Incentive Tariffs

Current framework for applying and maintaining incentive tariff regime

Characteristics of new tariff structure

- Tariff schedule set for qualifying Oblenergos for 2 regulatory periods (3 years then 5 years) with gradual increases in tariff classes
- Oblenergo divides assets into transmission assets and supply for reporting purposes
 - Transmission and distribution assets receive different amortization periods depending on type and lifetime of asset
- Oblenergo allowed to increase rate of return on asset base (5% for old assets, 14.79% for new assets) and amortization periods
- In order to maintain these treatments, NEURC holds the Oblenergos to investment and performance metrics

Benefits of incentive tariff structure

- incentive tariff system encourages companies to reduce costs - cost savings are company income;
- incentive tariff system provides the source for renewing assets;
- it makes it possible to plan activities for 3-5 years and to attract credit resources;
- improving the quality of services provided to consumers;
- incentive tariff system increases value of the companies.

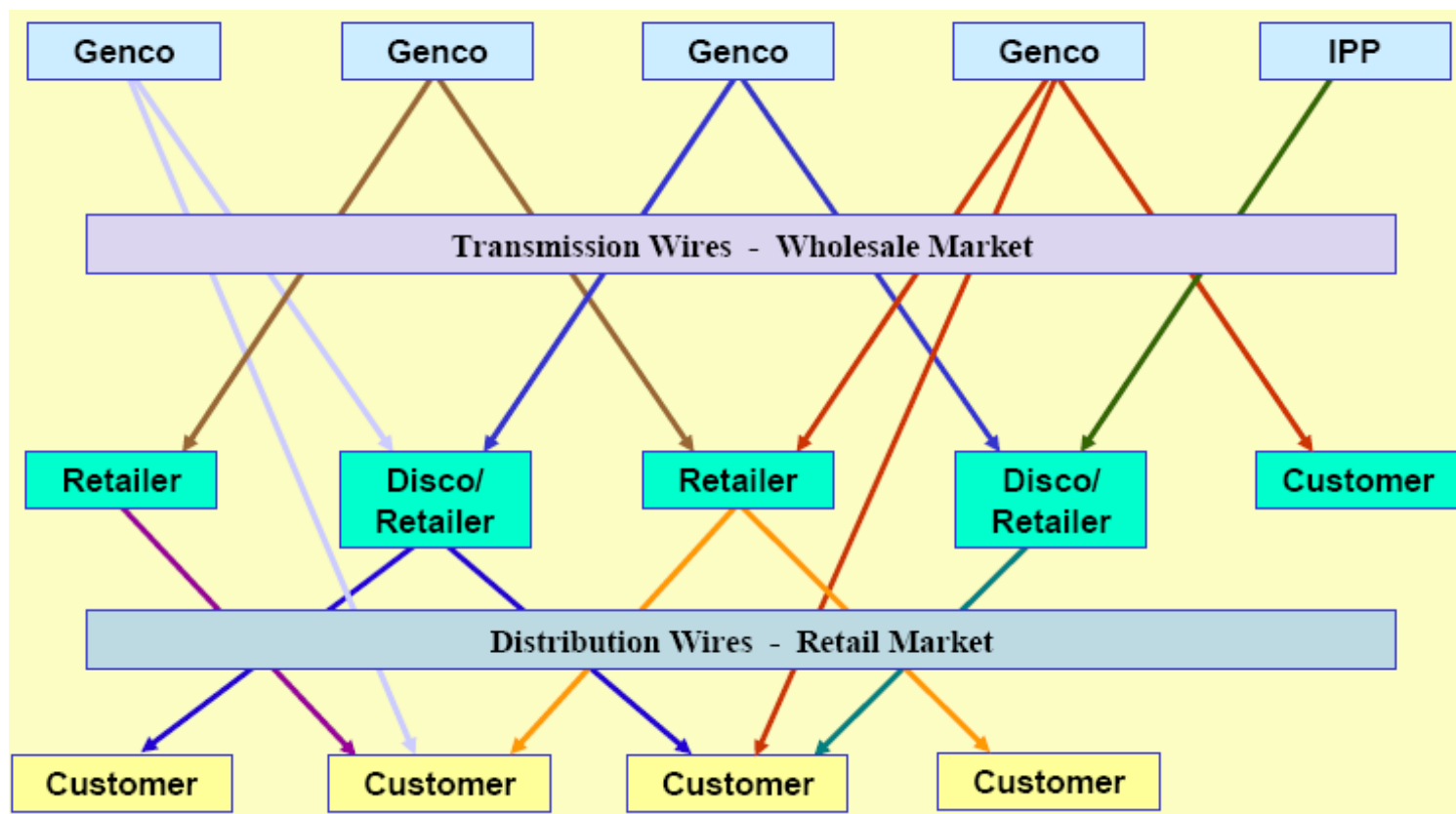
Requirements for receiving/maintaining incentive tariff

- Licensee must have no outstanding debts to Energorynok or mutually-agreed debt restructuring scheme
- Licensee must have asset valuation report compliant to the procedure №293 with positive SPFU review;
- Licensees must file tariff filing and have investment plan approved by NEURC
- Licensee must demonstrate technical capabilities to maintain quality of service standards:
 - Target quality of service indicators (less than 150 minutes of outages for the urban areas and 300 minutes for rural areas) to be achieved in 8 years from the transition to the new tariff system.
 - Overall efficiency rate for 1st year – 0%, for 2nd, 3rd – 1%; individual efficiency rate – 0%;
- Upon approval, licensee must fulfill the following conditions for the first regulatory period (3 years):
 - Payments in full to Energorynok (no debts or maintain restructuring plan);
 - Establish functional call center for consumers;
 - Demonstrate reliable provision of data for monitoring of the quality of services through the establishment of system of outages registration;
 - Execute annual capital investment plan of no less than the sum of depreciation and payment for reactive energy.

Future Market Model Transition and Impacts

Overview of Retail Market Operations

Ukraine will be transitioning to a retail market in compliance with EU Acquis

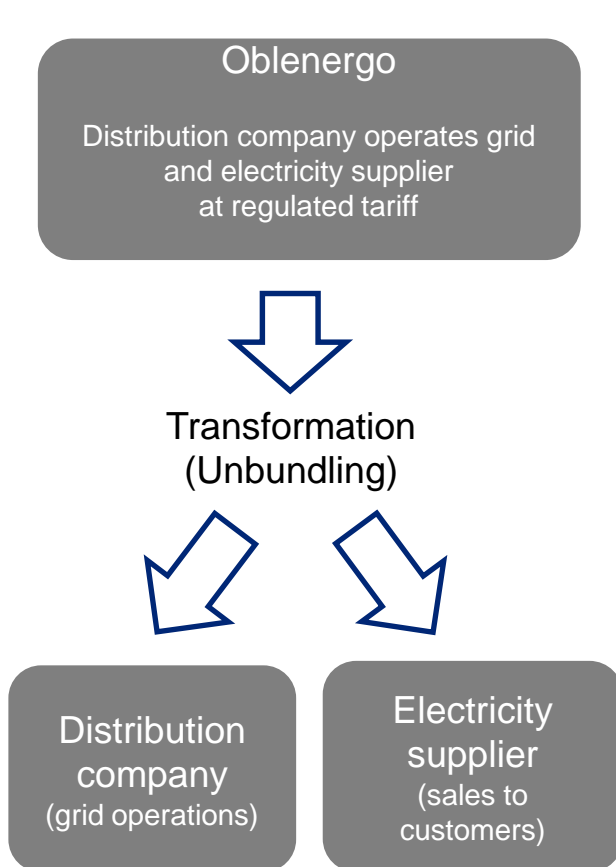


- A retail market allows for competition with utilities only providing lines to carry electricity
- Customers can enter contracts directly with generation companies or through suppliers
- Retail prices remain regulated, all other prices become competitive
- Requires sophisticated, independent system and market operators

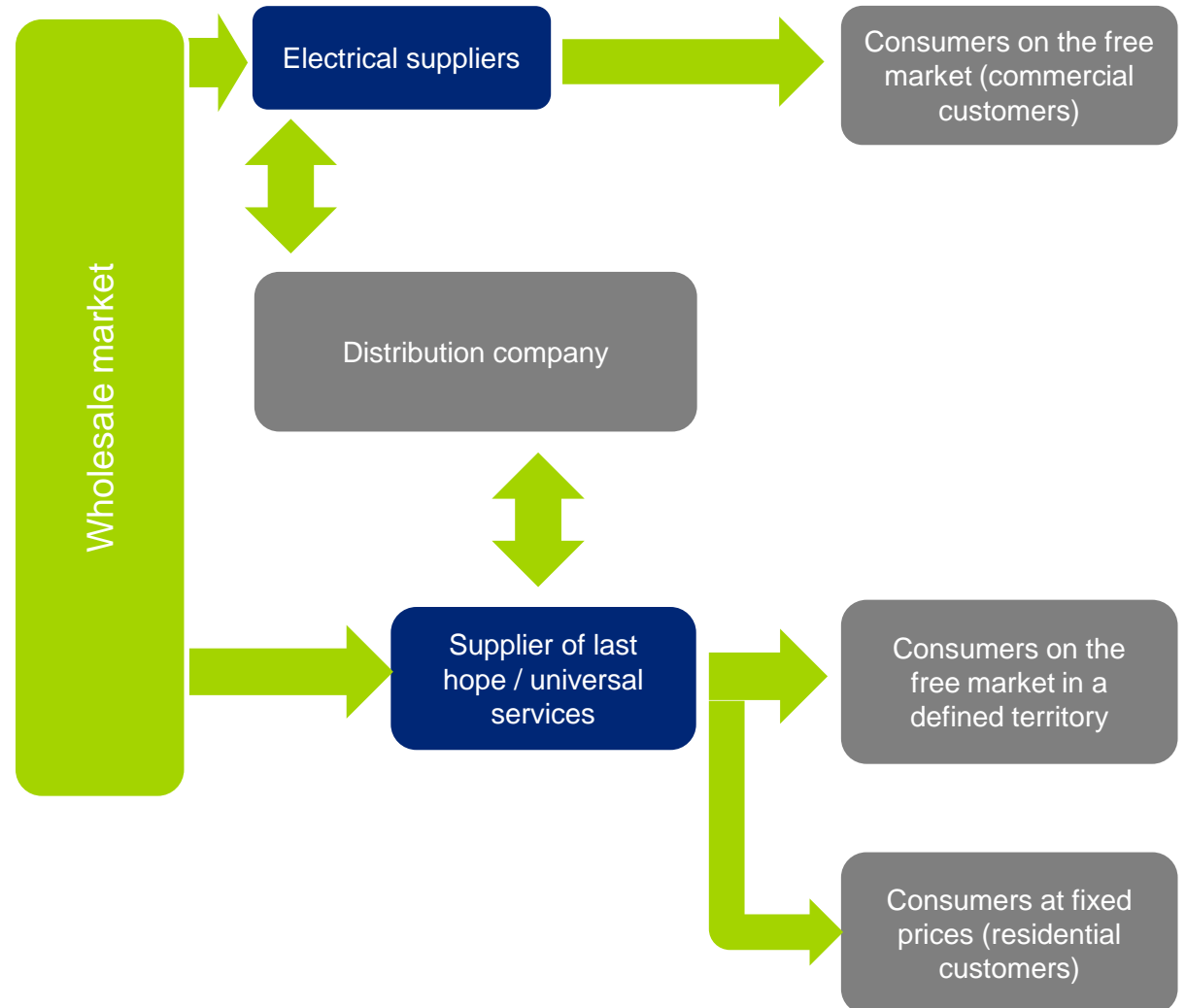
Future Market Model Transition and Impacts

Transition from Oblenergo to Distributor/Supplier

Transformation of the existing Oblenergos

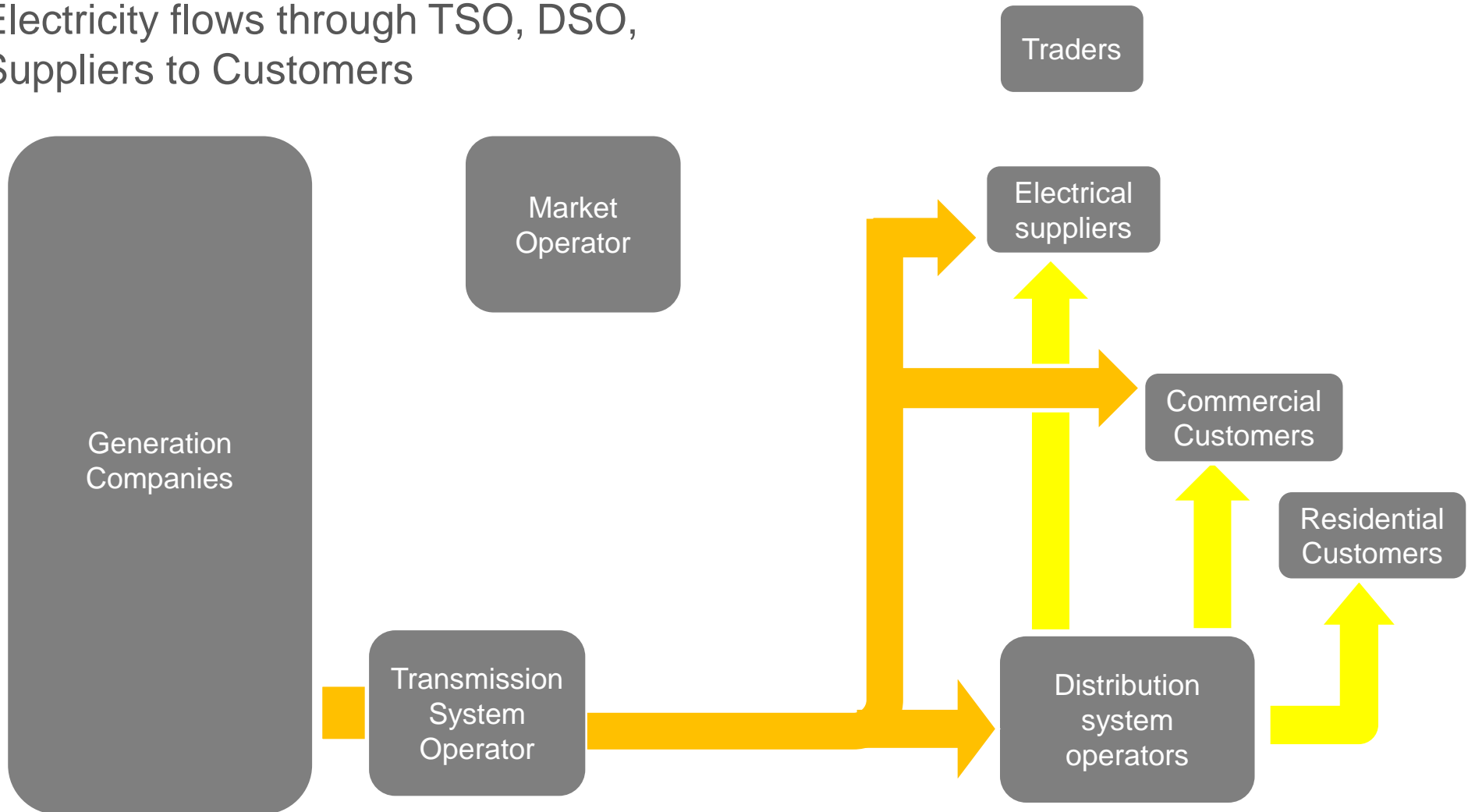


Creating market rules around separation of cash and electricity flows between distributors and suppliers



Future Market Model Transition and Impacts

Electricity flows through TSO, DSO, Suppliers to Customers

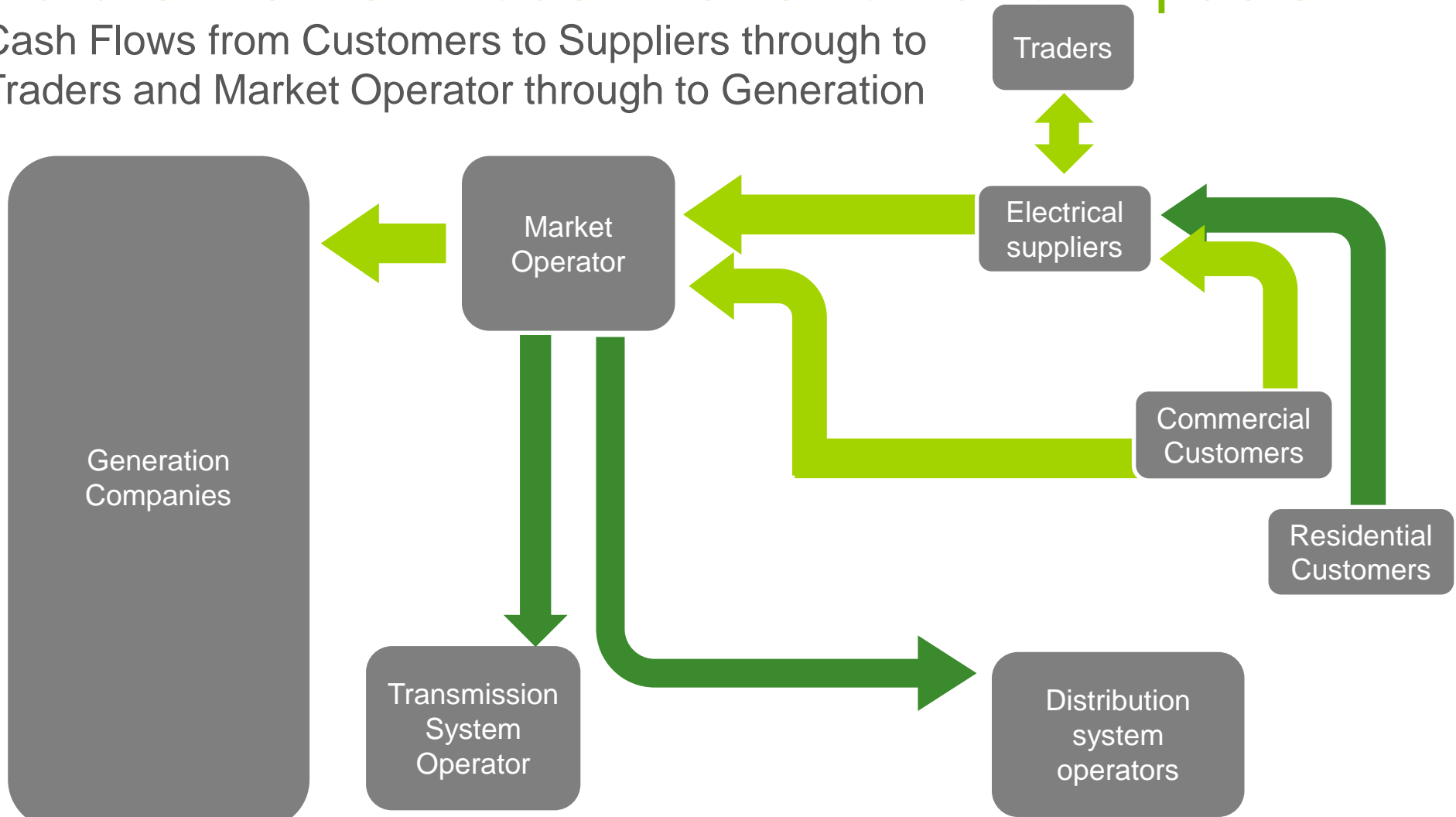


Key:

- Cash Flow (regulated prices)
- Cash Flow (unregulated prices)
- HV Electricity Transmission
- LV Electricity Distribution
- Sector Regulation

Future Market Model Transition and Impacts

Cash Flows from Customers to Suppliers through to Traders and Market Operator through to Generation

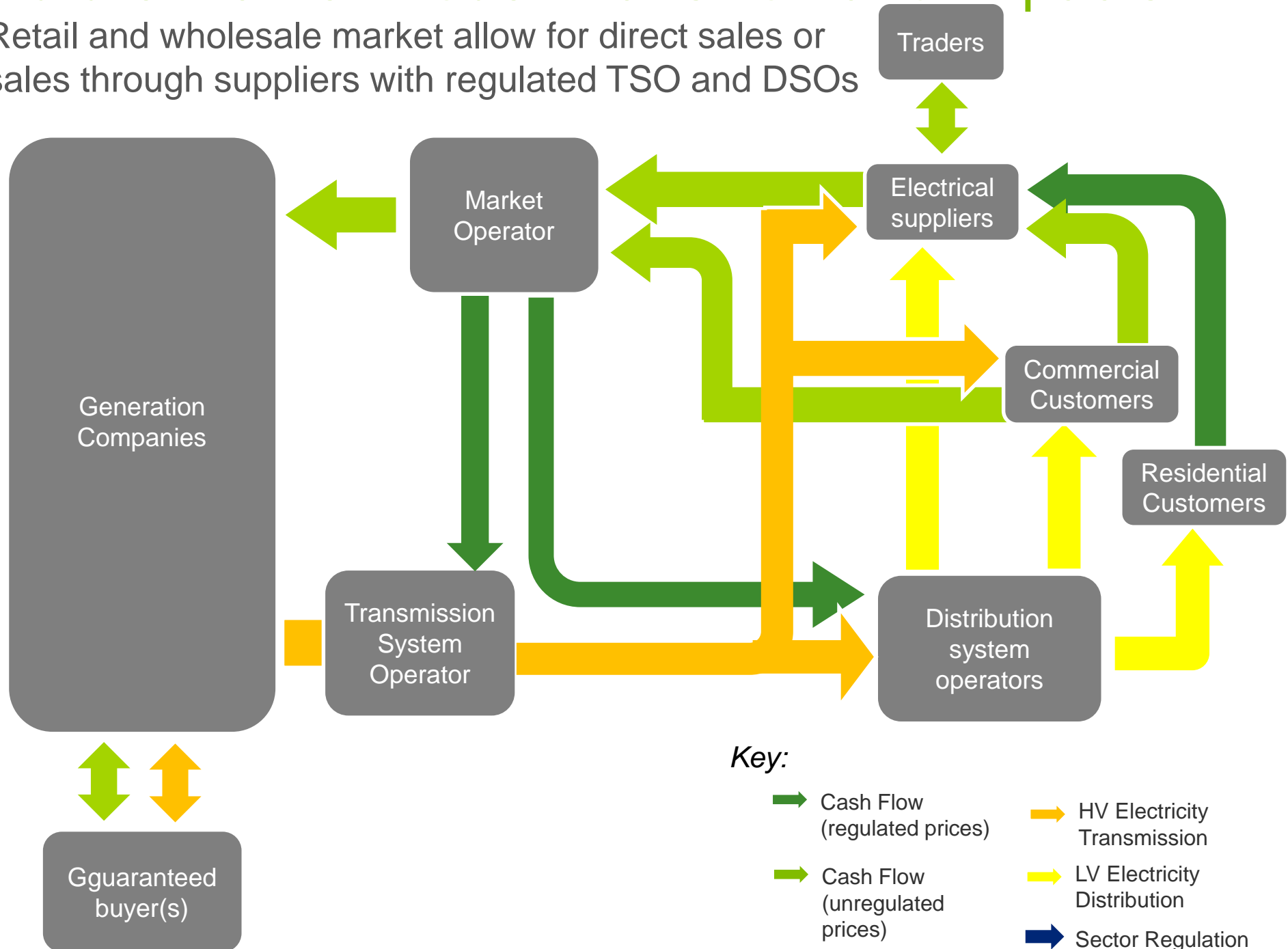


Key:

- Cash Flow (regulated prices)
- Cash Flow (unregulated prices)
- LV Electricity Distribution
- HV Electricity Transmission
- Sector Regulation

Future Market Model Transition and Impacts

Retail and wholesale market allow for direct sales or sales through suppliers with regulated TSO and DSOs



Future Market Model Transition and Impacts

Opportunities for participants to change operations

Market players	Gencos	Electrical suppliers	Distribution system operators	Transmission system operator	Traders	Customers
Guaranteed buyer	1	1	1	1		
Bilateral agreements				2	2	
«Day-ahead» market						
Intraday market						
Balancing market	3					
Auxiliary services market	3					

Key

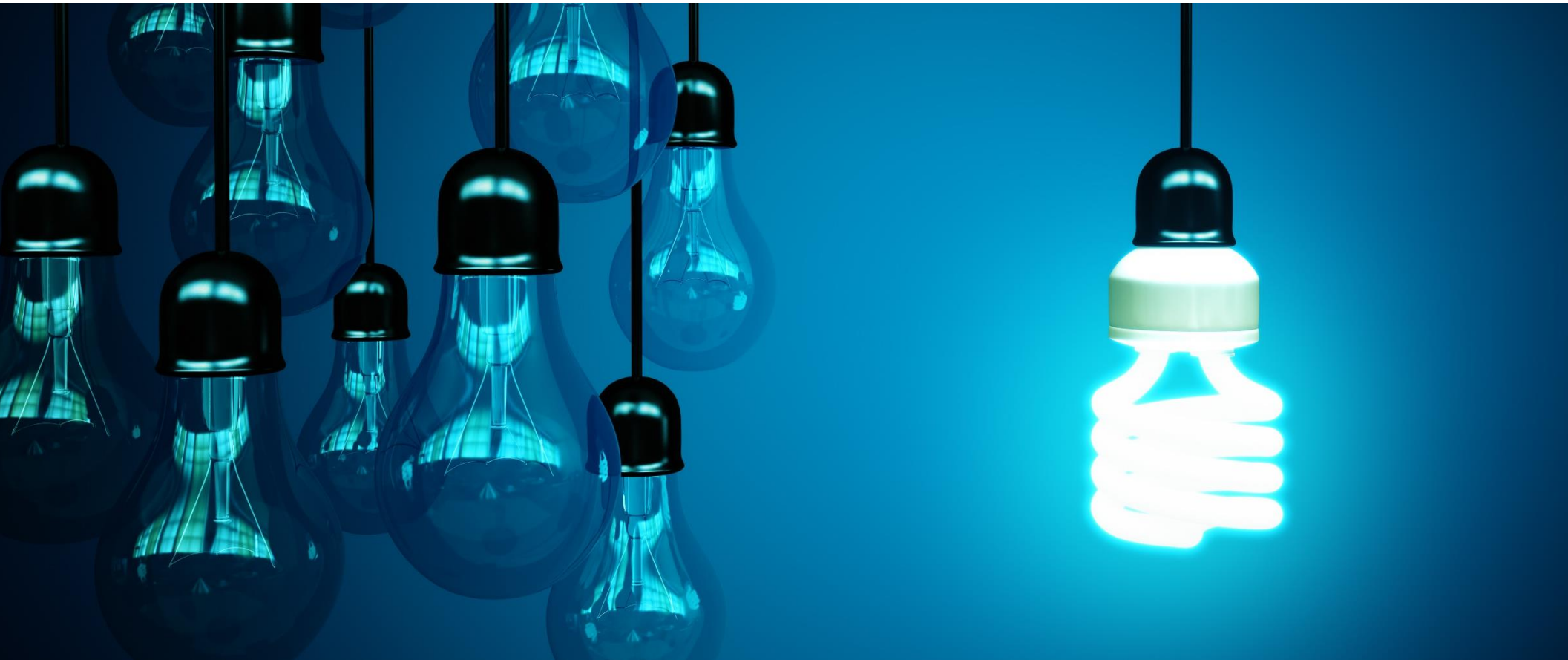
	New opportunity to open
	Opportunity not available

Comments

1. Possible donor to guaranteed buyer (except RE, HPP generation, which are possible recipients)
2. Bilateral agreements for TSO and trader to compensate for losses
3. Balancing and auxiliary services if technically feasible for that generation source

Appendix B:

Best Practices in Power Market Ownership Transformation



Best Practices in Market Transformations

Georgia – structural reform and market liberalization spurred cost recovery, investment in service quality, and opportunities for international integration and cross-border sales

Overview

After the fall of the USSR, civil war and economic disruptions reduced the ability of Georgia to pay for Russian energy supplies, causing severe energy shortages from 1992-2002. The Georgian government and the international donor community responded with a series of programs and aid for the energy sector. The first stage of Georgian electricity market reform began 1995-2004, focusing on commercialization and privatization. Further market liberalizations led to significant yet sustainable investments in infrastructure and renewable generation and the creation of an advanced international power-trading market

Privatization Strategies

1998-2003: AES purchases 75% of Telasi generation and distribution assets. Eventually AES sold at a loss to Inter-RAO because the enabling environment hindered ability to perform.

2000-2007: 5-year management contracts for other generation / distribution, transmission, and market operator.

2007: Share sale by public auction of UEDC to large Czech investor for \$400M with mandated tariffs and investment targets

Energy Market Reforms

1994: Sakenergo, state utility unbundled into generation, transmission, and distribution entities

1998: Electricity Law creates Georgian National Energy Regulatory Commission and the Georgia Wholesale Electricity Market.

2003: Rose Revolution brought massive political change, including focus on corruption and increasing transparency

2006: Transformation of single buyer market to wholesale electricity market and ESCO introduced.

- Allows direct contracts.
- ESCO buys/sells balancing power and reserve capacity.
- Deregulation of wholesale electricity

2013: New IPP project development rules set to increase transparency of public procurement of new generation

Outcomes

- **Domestic tariffs reached cost-reflective levels**
- **Management contracts of distribution companies improved KPIs for reliability, service quality, collections**
- **Reputable foreign buyers entered the market and made investments in new (and renewable) generation and upgraded distribution**
- **Power sector went from generation shortage to surplus. Georgia now exports power regionally**

Best Practices in Market Transformations

Nigeria – a stringent, well-messaged and transparent privatization process brought qualified domestic and international investors and capital into distribution entities

Overview

In order to expand generation capacity, reduce electricity losses, and improve quality of service, the Government of Nigeria created a privatization program that transformed the entire power sector. Consistent messaging from the regulator and the government provided investors with assurances that tariffs would rise to allow for reasonable returns on investment. Throughout the process there was also a strict adherence to international best practices and transparency, from the initial creation of a power sector holding company through bid evaluation. The result of the program was a transparent process that created \$1.8 billion in commitments for the government.

Privatization Strategies

2012: Transparent, extensive prequalification process to ensure financial and technical capabilities of bidders. Bids required technical pre-qualification and local partners.

2013: Share sales for generation and distribution companies. Disco evaluations based on investment commitments and loss reduction targets.

2013: Buyers claimed many assets were in worse technical condition than advertised. Regulator stepped in post-sale to provide assurances to investors and establish independent benchmarks of asset conditions.

Energy Market Reforms

1988: Government Decree on Commercialization and Privatization of the Electricity Sector

2001: National Electric Power Policy signaled privatization roadmap

2005: Electric Power Sector Reform act established independent regulator

2007: Creation of Government-owned holding company for all power assets in the country (G, T, and D)

2007-2012: Pre-privatization work ring-fencing individual units of G, T, and D infrastructure.

Outcomes

- **Government maintained clear policy guidance for years prior to privatization**
- **Focus on building capability, independence of regulator before, during, and after privatization**
- **Asset sales to qualified investors with transparent prequalification and bidding procedures**
- **Privatization raised over US\$1.8 billion in distribution investment commitments**

Best Practices in Market Transformations

Poland – Large-scale corporatization, consolidation, and privatization program stoked investor interest. Investment enabled the country to become compliant with EU community

Overview

After gaining independence, Poland defined its power sector goals as increasing efficiency of ownership and integration with the EU. In pursuing these goals, the government implemented laws that created the gradual integration of the Polish market into EU compliance and an aggressive privatization strategy. The privatization program utilized a number of different techniques, including attracting strategic investors, open-auction share sales, and evaluating bids on the basis of sale price as well as investment commitment. Polish example demonstrates the power of political will, transparency, and the strength of multiple privatization strategies.

Privatization Strategies

1990: Unbundling of electricity system into 32 generation and 33 distribution companies

1999-2003: Horizontal integration of generation assets, distribution assets to achieve scale attractive to international investors.

2000-2003: Privatizations initiated by Ministry of Finance included share sales conducted with evaluation on sale price, investment commitment + share price, or direct investments from strategic investors depending on nature of assets.

Energy Market Reforms

1997: Energy law set forth roadmap for EU integration

1999: Polish government issued guidance on privatization goals: liberalization, security, investment, management, social welfare conditions

2001: Opened hourly balancing/day-ahead market in compliance with EU standards

2004-2008: Polish government, regulator, transmission operator amended long-term PPAs signed prior to privatization

Outcomes

- **Reliability and investment improvements**
- **No one solution for privatization, many strategies can be pursued simultaneously to meet clear goals**
- **Government maintained partial ownership in sector while bringing in private management and capital**
- **EU integration is a long, arduous process but holds financial and operational incentives**
- **Bundling of assets helped achieve attractive scale**

Best Practices in Market Transformations

Bulgaria – privatization of state owned distribution companies facilitated by a clear regulatory framework, political commitment to market pricing/liberalization. State targeted proven strategic investors attracted by incentives for service quality improvements and benefits of integration.

Overview

Privatization of distribution companies followed earlier privatizations undertaken by the government. Earlier experiences, that included privatization of small hydroplants, helped shape the privatization strategy. The objective of the privatization was to attract necessary investments to reduce system losses (technical and commercial) and to bring effective, qualified management. It was anticipated the two objectives could be achieved by selling to international companies with proven expertise in liberalized markets and with access to necessary financial resources.

Privatization Strategies

2003-04: Privatization through sale of 67% equity stake to strategic investors through publically announced tenders for the 3 privately-owned companies. Tender process involved: Market sounding; Three Step selection process: i) screening & issue of eligibility certificate; ii) prequalification based on preliminary offers; iii) selection based on final offer. Investor eligibility criteria included: volume of electricity sales/delivery in 2002 minimum 7,000GWh; shareholder equity 2002: minimum €0.7 billion; Investment grade long term debt rating; experience in and significant share (26.5% minimum) in liberalized market operations; ownership structure either consortia or special purpose vehicles.

Energy Market Reforms

2000 - 2002: NEK unbundled, including formation of 7 distribution companies.

2002: Legislation passed to raise electricity prices closer to cost-reflective rates.

2003: New Energy Law passed

2003: Privatization Strategy of Distribution Companies adopted. Transaction advisor BNP Paribas hired.

2003-2004: The 7 distribution companies grouped into 3 privately-owned companies with each having a minimum base of 500,000 customers, ahead of full privatization.

2012: Energy Act amended

2014: Electricity trade rules amended; Independent Bulgarian Energy Exchange (IBEX) licensed to operate an organized power exchange and day-ahead market

Outcomes

- **Clear regulatory framework, future projections and political commitment all improved process**
- **Three-step selection process screened out unwanted bidders, collusion through technical prequalification and two rounds of closed bidding**
- **Privatization winners have been challenged in court over KPIs for investment, service quality, asset ownership issues which were not solved before privatization**
- **Bundling of assets helped achieve attractive scale**