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ATWOOD**
— LLP —
ATTORNEYS AT LAW

Legal Structures for the New Electricity Sector and Implications for the TSO

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Thomas L. Welch

PIERCE ATWOOD
*One Monument Square
Portland, ME USA
+1-207•791•1113 office
+1-207•791•1350 fax*

www.pierceatwood.com
twelch@pierceatwood.com



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The Intent of the Electricity Legal Structure

- Dissatisfaction with government-owned, vertically integrated electricity sector
 - Transparency
 - Efficiency
 - Trade
- Develop a new sector that would produce greater efficiency, trade and transparency while preserving government role in vital sector



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First Principles

- Competition produces efficiency
- Electric sector is vital to economic and social life
- Transparency promotes efficiency and public support



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Electricity as a Commodity has Unique Characteristics

- Cannot be stored to any significant extent
 - “Real time” reliability requires central control
- Some sector elements retain natural monopoly characteristics
 - “Hybrid” structure of sector is likely to remain
- Electricity sector provides opportunity for achieving other social goals
 - Protection of vulnerable customers
 - Environmental



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Laws follow consistent pattern because they share basic principles and seek essentially the same objectives.

- Highly disaggregated sector (at least functionally and in accounting)
- Transparency given high value
- Specialized regulatory agency emerges in central role
- Role of TSO is critical for reliability and introduction of competition



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The EU Directives

- EU has made clear decision that competition and transparency should be advanced
- EU directives, and Athens Forum advancing those directives, include a variety of principles and requirements for the laws of EU members relating to the Electricity Sector



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EU Principles

- Competitive electricity market will produce efficiency, lower prices and better service
- Market dominance and predatory behavior should be reduced through non-discriminatory tariffs, open access to networks, and protecting vulnerable customers
- EU “freedoms” require open market and trade
- Independent transmission and distribution systems are essential
 - Logic: Avoid discrimination against unaffiliated generation or supply



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Structure of Croatia Law for Electricity Sector

- Embodied principally in three Acts
 - Energy Activities Regulation Act
 - Electricity Market Act
 - Energy Law (and Law on Amendments to Energy Law)
- Taken together, these laws answer the following:
 - What are the objectives for the sector?
 - What are the entities in the sector, and what are their responsibilities?
 - How is government (including regulatory) control exercised over the sector?



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Objectives of the Croatian Law

- Energy Activities Regulation Act
 - Objectivity, transparency, non-discrimination
 - Establish methodologies for pricing
 - Promote competition and efficiency
 - Promote investment and entrepreneurship
 - Protect the environment
 - Protect customers and providers



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Sector entities (participants)

- Electricity generators
- Transmission system operator
- Distribution system operator
- Electricity suppliers
 - To tariff customers
 - To eligible customers
- Market operator
- Customers
 - Tariff
 - Eligible



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Sector entities (government)

- Energy Regulator (HERA)
- Croatian Parliament
- Ministry



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Elements in Croatian Law

- Establish the functional divisions within the sector
- Establish the regulatory agency and describe its powers and duties
- Describe what is subject to price regulation how price regulation is to be carried out
- Provide the legal basis for the interactions and activities in the sector



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Areas covered by the Law

- Energy Law
 - Energy Policy and Strategy
 - Passed by the Parliament
 - Looks ahead 10 years, with 3 year implementation plan
 - Energy balance plan to be developed by Ministry
 - National Energy Programs
 - Programs to be developed by the Government
 - Energy Efficiency and Renewable Resources
 - Rules passed by the Ministry
 - Licensing of energy sector activities
 - Approved by Government based on proposal by the regulator and the Ministry



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Areas covered by the Law

- Energy Law (continued)
 - Market based and public services
 - Generation and supply for tariff customers, transmission, distribution, organization of the market, system operation are public services and regulated
 - Logic: Essential activities
 - Electricity Prices
 - Determines which prices are to be governed by tariff: all the “public services”
 - Logic: Current or natural monopolies
 - Describes essential tariff characteristics: cost based, should provide incentives, promote renewable resources, same throughout Croatia



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Areas covered by the Law

- Energy Law (continued)
 - Conditions of Energy Supply to Customers
 - Governs quality of service and connections
 - Right of way
 - Ensures access to private property
 - Logic: Allows efficient system
 - Penalties
 - Provides for fines for failing to comply with the requirements of the law



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Areas covered by the Law

- Energy Activities Regulation Act
 - Creates the Croatian Energy Regulatory Authority (HERA)
 - Articulates scope of activities and powers
 - Describes composition, budget and appointments
 - Provides for fines for failure to provide data on request



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Areas covered by the Law

- Electricity Market Act
 - Distinguishes market from regulated activities
 - Market includes generation and supply to eligible customers and trading
 - Regulated includes generation and supply for tariff customers, transmission, distribution, and market organization
 - Logic: Consistent with Energy Act determination concerning public services



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Areas covered by the Law

- Electricity Market Act (continued)
 - Generation
 - Rights (to operate, contract, access to network) and duties (comply with license, rules, law)
 - Licensing requirements
 - Tender procedures where insufficient generation is being built
 - Transmission and distribution
 - Describes role of TSO and DSO
 - More on this later
 - Grid Code
 - Technical requirements



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Areas covered by the Law

- Electricity Market Act (continued)
 - Electricity Supply
 - Differentiates between supply to eligible and to tariff customers
 - Government to prescribe renewable production requirements
 - Market Operator
 - Organizes and supervises market
 - More on this later from Mr. Schmidt
 - Eligible Customer
 - Phased opening of the market
 - Smaller customers are free to remain tariff customers
 - Prices for supply are set by market, not regulation



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Areas covered by the Law

- Electricity Market Act (continued)
 - Tariff customers
 - Prices regulated
 - Discounts may be given for economic or social reasons
 - Reciprocity
 - Market Operator and TSO may refuse access for import from a system that has a less open market
 - Supervision
 - Ministry and Inspectorate have principal roles in administering and enforcing the Act
 - Penalties
 - Provides for fines for specified violations



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The Role of the TSO

- Performs two vital functions
 - Ensuring reliability in real time
 - Physical plant
 - Operational elements
 - Ensuring open access and non-discriminatory treatment for the benefit of the competitive market
 - Interconnection
 - Real time transmission access and dispatch
- The importance of both function, and the tension between them, produces extensive legal and regulatory requirement for the TSO



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TSO Functions

- Electricity Market Act gives TSO task of:
 - Securing long term transmission capacity
 - Managing electricity flows
 - Non-discriminatory interconnections with generation and other systems
 - Energy balancing
 - Measuring and reducing losses
 - Coordinating with other system operators
 - Providing information to system users



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TSO Functions

- Electricity Market Act requires TSO to be responsible for:
 - Operation, construction and maintenance of transmission
 - Reliability
 - System control
 - Providing settlement data to market participants
 - Give preferences to certain domestic generators
 - Providing advice concerning future system needs
 - Environmental considerations



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TSO Functions

- Electricity Market Act requires TSO to:
 - Separate costs from DSO and other parts of company to avoid cross subsidy, and keep proper records
 - Establish rules to ensure proper separation of functions
 - Avoid discrimination concerning interconnection and operation
 - NOT trade in electricity
 - Develop proposal for Grid Code



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TSO Role is Central

- Virtually all market transactions involve TSO activity
 - IPP sales to tariff supplier and eligible customers
 - Imports and Exports
- System reliability depends on TSO actions
 - Interconnection standards
 - Planning and system construction
 - Dispatch, balancing and scheduling
 - Available Transmission Capability
- Discrimination, bias or errors in any of these activities compromises the system and the market



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HERA Functions

- Energy Activities Regulations Act
 - Issues licenses
 - Adopts tariff methodology (Ministry sets tariff levels)
 - Provides advice concerning supply conditions
 - Tenders and approves for generation less than 50 MW, and proposes to Government for units larger than 50 MW
 - Approves network construction plans and projects
 - Determines status of eligible producers
 - Resolves disputes among market participants



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HERA Functions

- Energy Activities Regulations Act (continued)
 - Monitors
 - Interactions with neighboring countries
 - Congestion management in transmission system
 - TSO and DSO repair schedules
 - Information provided by TSO
 - Separation of Accounts
 - TSO and DSO performance in general
 - Ensures non-discriminatory behavior by TSO and DSO



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What are key interactions between TSO and Regulator and why are they important?

- Tariffs to allow recovery of TSO costs
- Separation of functions between TSO and other portions of HEP
- Non-discrimination
 - Connections
 - Operation
 - Planning
- Approval of network plans and construction
- Operational performance



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Tariffs

- HERA has responsibility for methodology and recommendation to Ministry concerning tariff level
- In order to accomplish this, accurate, timely and comprehensive information is vital:
 - Uniform system of accounts
 - Responses to requests for information
 - Financial and operational reports
- Value to TSO and the sector
 - Enhances chances for cost recovery
 - Enhances transparency



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Tariffs: Issues

- Confidentiality
- Extent of requested data
 - USoA requirements
 - Annual and other periodic reports
- Sufficiency of recommended rate levels



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Separation of Functions

- TSO must demonstrate that it is sufficiently separated from other HEP functions and operations
- Energy Law requires separation of accounts, and HERA has task of monitoring compliance
- Value to TSO and the sector
 - Increases transparency and confidence of market participants concerning openness of the system and the market
 - Independence is critical value for TSO to permit competition
 - Improves prospects for commercialization



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Separation of Functions: Issues

- Degree of control by HERA
- Sufficiency of separation
- Monitoring of separation



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Non-Discrimination

- HERA has legal obligation to ensure that TSO conduct does not discriminate in connections or in operation
- Non-discrimination by TSO is crucial to success of any degree of competition in the sector
- Value to TSO and sector
 - Confirmation by independent regulator of non-discrimination eases burden on TSO
 - HERA confirmation increases market confidence



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Non-Discrimination: Issues

- Detection and Enforcement
 - Codes of conduct
 - Audits and monitoring
 - The tension between operations and non-discrimination
- Reporting burdens
- Distinguishing between genuine network needs and unwarranted discrimination



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Approval of Network Plans and Construction

- HERA has obligation to review and approve TSO network construction plans and projects
- Planning is critical function for both reliability and market
- Value to TSO and sector
 - Provides transparent confirmation of TSO activities
 - Provides forum for sector participants to inform planning process



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Approval of Network Plans and Construction: Issues

- Degree and method for market participant participation
- Generation/Transmission/Conservation estimates and reconciliation



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Operational performance

- HERA has general obligation to monitor and evaluate TSO performance
- TSO has central reliability function; highly technical
- Value to TSO and sector
 - Supports public confidence in the sector



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Operational performance: Issues

- HERA technical capacity
- Process of oversight (burden on TSO)
- Operational standards and enforcement



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Concluding Issues

- Relationship between degree of structural separation of TSO and need for oversight on discrimination issues
- HERA and TSO relative capacity on technical issues
- Pervasive value of transparency