

ULOGA REGULATORNOG TIJELA U DONOŠENJU TARIFNIH SUSTAVA: OKRUGLI STOL – PRIKAZ I ZAKLJUČCI THE ROLE OF THE REGULATORY AGENCY IN THE ADOPTION OF TARIFF SYSTEMS: ROUND TABLE DISCUSSION – REPORT AND CONCLUSION

Dr. sc. Mićo Klepo, Hrvatska energetska regulatorna agencija,
Koturaška cesta 51, 10000 Zagreb, Hrvatska

Krajem 2006. godine Hrvatska energetska regulatorna agencija donijela je metodologije za izračun tarifa za djelatnosti proizvodnje, prijenosa, distribucije i opskrbe električnom energijom, koje su do sada bile komponente jedinstvene tarife za integrirani sustav djelatnosti proizvodnje, prijenosa, distribucije i opskrbe električnom energijom. Sukladno zakonskoj obvezi razdvajanja navedenih djelatnosti, izraženih i kroz pristup spomenutim metodologijama tarifnih sustava, u tijeku su poslovi vezani uz izračun i donošenje tarifnih stavki za navedene energetske djelatnosti.

Primjenom spomenutih metodologija, odnosno donošenjem i stupanjem na snagu novih tarifnih stavki elektroenergetski sektor i elektroenergetsko gospodarstvo Republike Hrvatske ući će u probno regulatorno razdoblje. Stoga je i za regulatorno tijelo, za predstavnike reguliranih djelatnosti, jednako tako i za stručnu javnost od velike važnosti i pomoći bilo raspraviti neka pitanja i dileme iz predmetne problematike, i to upravo na skupu s predstavnicima raznih zainteresiranih strana.

In late 2006, the Croatian Energy Regulatory Agency adopted methodologies for the calculation of tariffs for the activities of the generation, transmission, distribution and supply of electricity, which until now have been components of a single tariff for an integrated system of the activities of the generation, transmission, distribution and supply of electricity. Pursuant to the legal obligations to separate these activities, as also expressed through the approach of the cited methodologies of the tariff systems, activities are in progress in reference to the calculation and adoption of tariff items for the aforementioned fundamental energy activities.

With the application of the cited methodologies, i.e. the adoption and coming into force of the new tariff systems of the electricity sector and the electricity sector of the Republic of Croatia, a new trial regulatory period will be entered. Therefore, for the regulatory agency, representatives of the regulated entities, and professional public, discussion of several questions and dilemmas from this area at a meeting among representatives of various interested parties was considered to be of great importance and benefit.

Ključne riječi: energetska regulatorna tijela, ekonomska regulacija, metoda priznatih troškova, metodologija tarifnog sustava, regulacija stopom povrata
Key words: economic regulation, energy regulatory agency, method of recognized costs, regulation of the rate of return, tariff system methodology



1 UVOD

Na inicijativu SO C5 – Tržište električnom energijom i regulacija, IO HRO CIGRÉ, u Zagrebu je 15. svibnja 2007. godine održan Okrugli stol – Uloga regulatornog tijela u donošenju tarifnih sustava.

Okrugli stol organiziran je sa svrhom i ciljem da predstavnici regulatornih tijela i predstavnici reguliranih subjekata uz prisutnost stručne javnosti izlože svoja iskustva i poglede, odnosno rasprave problem uloge i postupanja regulatornog tijela te sadržaja ekonomske regulacije kada su u pitanju tarifni sustavi za proizvodnju, prijenos, distribuciju i opskrbu električnom energijom. Naravno, postoji bitna razlika između, s jedne strane proizvodnje i opskrbe električnom energijom kao primarno tržišnih djelatnosti, dakle djelatnosti izloženih konkurenciji, i s druge strane infrastrukturnih prirodnih monopolnih djelatnosti prijenosa i distribucije električne energije, koji su u pravilu regulirane djelatnosti. Zakonodavni i regulatorni okvir u kojem postoji jasno izražena obveza javne usluge opskrbe tarifnih kupaca taj kontekst može djelomično izmijeniti na način da energetske djelatnosti proizvodnje i opskrbe električnom energijom i nadalje ostaju predmetom ekonomske regulacije i nadzora energetskog regulatornog tijela. Tako su u ovom slučaju sve četiri navedene usluge stavljene u kontekst općeg ekonomskog (gospodarskog) interesa i povjerena jednom poduzeću, da bi se osigurala sigurna, redovita i kvalitetna opskrba energijom po razumnim cijenama, vodeći računa o zaštiti okoliša. U svakom slučaju, problematika odabira pristupa i utvrđivanja metodologije ekonomske regulacije i donošenja odgovarajućih tarifnih sustava za svaku od navedenih energetskih djelatnosti, koje su ranije bile uključene u integrirani tarifni sustav, i na koje se sada trebaju primijeniti zasebni tarifni sustavi, stvara jedan potpuno novi problem koji je uz to praćen problemom efikasnog odvajanja energetskih djelatnosti. Dakako, sustavi i regulatorna tijela drugih zemalja bili su suočeni i suočavaju se sa sličnim pitanjima i problemima. Stoga je bilo važno raspraviti neka pitanja i dileme iz predmetne problematike s predstavnicima raznih zainteresiranih strana, a poglavito je bilo važno čuti iskustva i stavove relevantnih eksperata iz europskih regulatornih tijela i zemalja s višegodišnjim iskustvom u ekonomskoj regulaciji, bilo da se radi o dugogodišnjim članicama EU, ili zemljama koje su tek nedavno postale članice EU.

1 INTRODUCTION

At the initiative of SC C5 – Electricity Markets and Regulation, the Croatian National Committee of CIGRÉ, the Round Table Discussion on the Role of the Regulatory Agency in the Adoption of Tariff Systems was held in Zagreb on May 15, 2007.

The Round Table Discussion was organized with the purpose and goal of providing the opportunity for representatives of the regulatory bodies and the regulated entities to present their experiences and views in the presence of the professional public, i.e. discuss the problem of the role and approach of the regulatory agency and the content of economic regulation regarding the question of the tariff systems for the generation, transmission, distribution and supply of electricity. Naturally, there are significant differences between the generation and supply of electricity as primary market activities, i.e. activities subject to competition on the one hand, and on the other hand the infrastructural natural monopolistic activities of the transmission and distribution of electricity, which as a rule are regulated activities. The legislative and regulatory framework in which there are clearly expressed public service obligation supplying tariff customers can partially alter this context in that the energy activities of the generation and supply of electricity continue to remain subject to economic regulation and supervision by the energy regulatory agency. All four of the stated services are considered to be of general economic interest and entrusted to a single enterprise in order to assure a reliable, regular and quality energy supply at reasonable prices, while taking environmental protection into account. In any case, the problems of selecting an approach, determining a methodology for economic regulation and adopting the suitable tariff systems for each of the cited energy activities that were previously included within an integrated tariff system, for which it is now necessary to apply separate tariff systems, create a completely new problem which is accompanied by the problem of the effective separation of energy activities. Certainly, the systems and regulatory agencies of other countries have been confronted with similar questions and problems. Therefore, it was important to discuss certain questions and dilemmas regarding this topic with representatives of various interested parties and it was especially important to hear about the experiences and positions of relevant experts from the European regulatory agencies and countries with many years of experience in economic regulation, whether longstanding members of the European Union or countries that have only recently become members of the EU.

U radu Okruglog stola po pozivu su uz prezentacije i predavanja, te kroz diskusije različitih uloga i nadležnosti regulatornih tijela, ali i praktičnih pristupa regulaciji i problemu donošenja tarifnih sustava, sudjelovali predstavnici regulatornih tijela Francuske, Austrije, Slovenije, Mađarske i Hrvatske, te predstavnici Hrvatske elektroprivrede d.d., odnosno predstavnici energetske subjekta u Republici Hrvatskoj za koje se donose i primjenjuju odgovarajući tarifni sustavi. Okrugli stol pobudio je veliki interes stručne javnosti i intenzivnu diskusiju problema i sadržaja uloge regulatornog tijela kada su u pitanju regulatorni pristupi i metode ekonomske regulacije energetske djelatnosti, dakako onih energetske djelatnosti koji imaju monopolne pozicije ili kojima su pridijeljene obveze javnih usluga. Interes za teme metodologija tarifnih sustava, strukture, utjecajnih parametara, podloga i dokaza za utvrđivanje razine tarifnih stavki i inače pobuđuju veliki interes, što se očitovalo i na ovom Okruglom stolu.

2 OSNOVNI ZAKONODAVNI OKVIR EU ZA USPOSTAVU TRŽIŠTA ELEKTRIČNE ENERGIJE I SADRŽAJ REGULACIJE

Ključni akti Europske komisije koji definiraju opći okvir osnivanja i rada energetske regulatornih tijela, odnosno utvrđuju opće smjernice i standarde organizacije energetske tržišta i nadležnosti tih tijela u svezi električne energije su:

- Direktiva 2003/54/EZ Europskog parlamenta i Vijeća ministara o općim pravilima za unutrašnje tržište električne energije i prestanku važenja Direktive 96/02/EZ, koja utvrđuje opća pravila za proizvodnju, prijenos, distribuciju i opskrbu električnom energijom, te definira pravila o organizaciji i funkcioniranju elektroenergetskog sektora, pristupa tržištu, kriterije i postupke koji se primjenjuju za objavu nadmetanja i davanje odobrenja i upravljanje sustavima,
- Direktiva 2003/55/EZ Europskog parlamenta i Vijeća o zajedničkim pravilima unutarnjeg tržišta prirodnog plina i ukidanju Direktive 98/30/EZ, koja utvrđuje zajednička pravila za prijenos, distribuciju, opskrbu i skladištenje prirodnog plina, LNG-a i druge tipove plinova koji se mogu tehnički i sigurno ubacivati i transportirati kroz sustav za prirodni plin, te definira pravila o organizaciji i funkcioniranju sektora, pristupa tržištu, kriterije i postupke

In the Round Table Discussion, in addition to invited presentations, lectures and the discussion of the various roles and authorities of regulatory agencies, as well as practical approaches to regulation and the adoption of tariff systems, representatives of the regulatory agencies of France, Austria, Slovenia, Hungary and Croatia as well as representatives of Hrvatska elektroprivreda d.d., i.e. representatives of the energy entities in the Republic of Croatia who adopt and apply the corresponding tariff systems, also participated. The Round Table Discussion aroused great interest among the professional public and provoked intense discussion on the problem and content of the role of the regulatory agency regarding regulatory approaches and methods for the economic regulation of energy activities, i.e. those energy activities that have a monopoly position or to whom the public service obligation has been assigned. The topics of the methodologies of the tariff systems, the structure, influential parameters, basis and evidence for the determination of various tariff items attract great interest generally, which was also apparent at this Round Table Discussion.

2 THE BASIC LEGISLATIVE FRAMEWORK OF THE EUROPEAN UNION FOR THE ESTABLISHMENT OF AN ELECTRICITY MARKET AND THE CONTENT OF REGULATION

The key acts of the European Commission that define the general framework for the establishment and activity of energy regulatory agencies, i.e. determine the general guidelines and standards for the organization of the energy market and the authorities of these bodies in connection with electricity, are as follows:

- Directive 2003/54/EC of the European Parliament and of the Council of Ministers on Common Rules for the Internal Market in Electricity and Repealing Directive 96/02/EC, that determines the general rules for the generation, transmission, distribution and supply of electricity and defines the rules on the organization and function of the electricity sector, market approach, the criteria and processes that are applied for announcing tendering procedures, issuing authorizations and managing systems,
- Directive 2003/55/EC of the European Parliament and of the Council Concerning Common Rules for the Internal Market in Natural Gas and Repealing Directive 98/30/EC, which determines the common rules for the transmission, distribution, supply and storage of natural gas, liquefied

- koji se primjenjuju na davanje odobrenja i rad sustava,
- Uredba 1228/2003/EZ Europskog parlamenta i Vijeća o uvjetima pristupa mreži za prekograničnu razmjenu električne energije, te
 - Uredba 1775/2005/EZ o uvjetima pristupa transportnim mrežama za prirodni plin.

Unutar tog općeg zakonodavnog okvira regulatornom tijelu mogu se dodijeliti različite nadležnosti i odgovornosti, odnosno poslovi. Na Okruglom stolu prezentacijama i raspravom primarno su bile obuhvaćene nadležnosti i uloga regulatornog tijela u pogledu donošenja metodologija tarifnih sustava i/ili određivanja tarifa/naknada za energetske usluge, odnosno krajnje kupce. Neposredno u svezi s tim prezentirani su i raspravljani i mogući pristupi reguliranju monopola ili javnih usluga (cijena korištenja mreže, uvjeta pristupa mrežama, pravila za vođenje sustava, uvjeta osiguranja stabilnosti i pouzdanosti sustava, pravila i uvjeta osiguranja pomoćnih usluga sustava). Širom raspravom bile su obuhvaćene i ostale nadležnosti i poslovi koji se u pravilu dodjeljuju regulatornom tijelu, kao što su nadzor standarda kvalitete i izvedbe, kreiranje i provođenje općih uvjeta, propisa i standarda, reguliranje ulaska energetskih subjekata u sektor (dozvole, povlašteni statusi, priključenja, nova izgradnja) i nadzor nad tržištem, izvještavanje, savjetovanje vlade, ministarstava, javnosti, rješavanje žalbi na rad operatora sustava i rješavanje žalbi i sporova kupaca.

Na Okruglom stolu jasno je pokazano da je unutar tog jednog općeg zakonodavnog okvira svaka zemlja članica EU razvila i uspostavila vlastiti zakonodavni i regulatorni okvir za tržište električne energije i rad nacionalnog regulatornog tijela, temeljeći rješenja i praksu na važećem osnovnom nacionalnom pravnom i zakonodavnom sustavu. Opće je pravilo, a isto je više puta i u svim slučajevima ponovljeno na gotovo istovjetan način od strane predstavnika regulatornih tijela Francuske, Austrije, Slovenije, Mađarske i Hrvatske, sudionika Okruglog stola, da je cilj svake zemlje uspostaviti neovisno i efikasno nacionalno regulatorno tijelo koje će stvoriti uvjete i nadzirati razvoj i uspostavu razvidnog, efikasnog i nepristranog tržišta električne energije i plina na dobrobit svih sudionika tih tržišta i krajnjih korisnika. Preduvjeti razvidnog, efikasnog i nepristranog tržišta električne energije i plina su osiguranje i provedba razvidnog i nediskriminirajućeg pristupa energetskim mrežama po unaprijed poznatim, reguliranim uvjetima, neovisan i nepristran rad operatora energetskih sustava, razvidno i nepristrano rješavanje sporova i prigovora na pristupe mrežama i rad operatora mrežnih sustava, efikasna provedba i garancije računovodstvenog i upravljačkog

- natural gas (LNG) and other types of gases that can technically and safely be injected into and transported through the natural gas system, and defines the rules on the organization and function of the sector, market access, criteria and procedures that are applicable to the granting of authorizations and the operation of the system,
- Regulation 1228/2003/EC of the European Parliament and of the Council on Conditions for Access to the Network for Cross-Border Exchanges in Electricity, and
 - Regulation 1775/2005/EC of the European Parliament and of the Council on Conditions for Access to the Natural Gas Transmission Networks.

Within this general legislative framework, various authorizations and responsibilities, i.e. tasks can be assigned to a regulatory agency. At the Round Table, the presentations and discussions were primarily about the authorities and roles of the regulatory agency regarding the adoption of methodologies for tariff systems and/or determining tariffs/charges for energy services, i.e. the final customers. In connection with this, potential approaches to the regulation of monopolies or public services were presented and discussed (the cost of network use, conditions for network access, rules for system management, conditions for assuring the stability and reliability of a system, and rules and conditions for securing auxiliary system services). Broader discussions included other authorities and tasks that as a rule are assigned to the regulatory body, such as the supervision of the standards for quality and implementation, the creation and implementation of general conditions, regulations and standards; regulation of the entry of energy entities into the sector (permits, privileged status, connections and new construction) and supervision over the market, reporting; advising the government, ministries and public; the settling of complaints regarding the work of the system operator, and customer complaints and disputes.

At the Round Table Discussion, it was clearly demonstrated that within this general legislative framework, each Member Country of the EU has developed and established its own legislative and regulatory framework for the electricity market and the work of the national regulatory agency, based upon the solutions and practice of the prevailing basic national legal and legislative system. As a general rule, which was repeated in all cases in a nearly identical manner in the presentations by the representatives of the regulatory agencies of France, Austria, Slovenia, Hungary and Croatia, i.e. the Round Table participants, the goal of every country is to establish an independent and efficient national regulatory agency that will create the conditions, supervise the development and establish transparent, efficient and nondiscriminatory electricity and gas markets for the benefit of all the

razdvajanja energetskih djelatnosti, sprječavanje međusobnih subvencioniranja reguliranih i nereguliranih djelatnosti unutar vertikalno ili horizontalno integriranih sustava, efikasan sustav prekograničnih razmjena, razvoj i uspostava efikasnih tržišnih mehanizama i slobodna tržišna utakmica itd.

S druge strane, činjenice i pojavnost su da regulatorna tijela u različitim zemljama imaju različite pozicije u odnosu na državna tijela i institucije, prvenstveno odgovarajuće vlade i ministarstva, te različite uloge i nadležnosti. U nekim zemljama regulatorna tijela su organizacijska jedinica ili dio ministarstva ili pod nadzorom ministarstva ili vlade. U drugim zemljama su ili značajno ili u potpunosti neovisna tijela. U nekim zemljama regulatorna tijela imaju nadležnost i obvezu nadzora provedbe podzakonskih akata, donošenja metodologija tarifnih sustava, davanja odobrenja na planove razvoja i planove investiranja reguliranih subjekata, nadzora provedbe ili primjene tarifnih sustava i tarifa, nadzora financijskog poslovanja, nadzora provedbe računovodstvenog i upravljačkog razdvajanja, nadzora kvalitete energetskih usluga, davanja odgovarajućih mišljenja i savjetovanja ministarstava i vlada o cijenama, tarifama, pitanjima uspostave energetskog tržišta i sl. U drugim zemljama nacionalna regulatorna tijela imaju jaču ulogu i nadležnosti, koje uključuju donošenje odgovarajućih podzakonskih akata, ali i poduzimanje odgovarajućih mjera, utvrđivanje tarifa i uvjeta pristupa mrežama, rješavanje sporova u svezi s pristupom mrežama i uvjetima korištenja mreža, rješavanje prigovora i žalbi na rad operatora mrežnih sustava, rješavanje prigovora i žalbi krajnjih kupaca i slično. Nisu zanemarivi i sustavi mjera i sankcija koje nekim regulatornim tijelima stoje na raspolaganju da bi osnažili svoje djelovanje i odluke.

Kada su u pitanju nadležnosti za definiranje i donošenje metodologija ekonomske regulacije, odnosno izbor, definiranje i donošenje osnovnog regulacijskog pristupa, metodologije tarifnog sustava i samih tarifa, uloge regulatornih tijela se razlikuju. Opet, u nekim zemljama regulatorna tijela imaju ključnu ulogu u svim segmentima procesa od definiranja metode regulacije i metodologije tarifnog sustava, nadzora poslovanja i revizije financijskih pokazatelja i izvješća energetskih subjekata, dubinske revizije i odobravanja troškova, definiranja i odobravanja ključnih regulacijskih i makroekonomskih parametara, primjene mehanizama javnog prezentiranja i očitovanja javnosti, odnosno korisnika i kupaca o iznosima tarifnih stavki itd. U drugim zemljama regulatornim tijelima dane su u nadležnost i obveze samo neka od navedenih prava, poslova i obveza. Najčešći

participants of these markets and the final customers. The prerequisites for transparent, efficient and nondiscriminatory electricity and gas markets are the assurance and implementation of transparent and nondiscriminatory access to the energy networks according to previously specified regulatory conditions, the independent and nondiscriminatory work of the energy system operators, the transparent and nondiscriminatory resolution of disputes and complaints regarding network access and the work of the network system operators, the efficient implementation and guarantee of the accounting and managerial unbundling of energy activities, the prevention of cross subsidies among regulated and unregulated activities within vertically or horizontally integrated systems, an effective system for cross-border exchanges, the development and establishment of efficient market mechanisms and free market competition etc.

Otherwise, the regulatory agencies in various countries have differing positions in relation to the state agencies and institutions, primarily the corresponding governments and ministries, and various roles and authorities. In some countries, the regulatory agencies are organizational units, parts of a ministry or under the supervision of a ministry or the government. In other countries, they are either considerably or entirely independent bodies. In some countries, the regulatory bodies have the authority and responsibility of supervising the implementation of bylaws, the adoption of the methodologies of the tariff systems, granting approval for the development and investment plans of the regulated entities, supervision over the implementation or application of tariff systems and tariffs, supervision over financial operations, supervision over the implementation of accounting and managerial unbundling, supervision over the quality of energy services, issuing suitable opinions and advising ministries and the government regarding prices, tariffs, questions regarding the establishment of the energy market etc. In other countries, the national regulatory agency has a strong role and powerful authority, including the adoption of suitable bylaws but also the undertaking of suitable measures for the determination of tariffs and conditions for network access, the settlement of disputes in connection with network access and conditions for network use, the settlement of complaints regarding the work of the network system operator, the settlement of complaints from the final customers etc. The system of measures and penalties that some regulatory agencies have at their disposal to enforce their activity and decisions is not insignificant.

When authorities are in question for the definition and adoption of methodologies for economic regulation, i.e. the selection, definition and adoption of the basic regulatory approach, methodologies of the tariff system and tariffs themselves, the roles of the

je slučaj da regulatorno tijelo ima obvezu i odgovornost za donošenje odgovarajuće metodologije tarifnih sustava, te nadzora poslovanja i troškova reguliranih subjekata. Regulatorna tijela u nekim zemljama daju mišljenja odgovarajućim ministarstvima i vladama u pogledu visine tarifnih stavki, u drugim zemljama imaju nadležnost utvrđivanja, odnosno reguliranja tarifnih stavki, što je u pravilu i cilj njihova osnivanja.

Konačno, nužno je ukazati i na treći aspekt ili razinu mogućih nadležnosti i odgovornosti regulatornih tijela. Tu treću razinu čine pristupi pojedinim segmentima ili problemima ekonomske regulacije kao što su problemi kriterija za pridjeljivanje i priznavanje razine operativnih troškova poslovanja, odobravanja i priznavanja investicija u nove objekte, postrojenja i instalacije, troškova kapitala, odnosno amortizacije i povrata na uložena sredstva, utvrđivanja odgovarajuće regulatorne baze i stope povrata na reguliranu imovinu, priznavanja odgovarajućih inflatornih utjecaja na troškove i tarife, utvrđivanja i priznavanja i drugih korektivnih faktora na troškove i tarife, te konačno i postupanja u slučaju viškova i manjkova prihoda na karaju regulacijskog perioda. Posebno je pitanje odnosa i postupanja prema kategorijama prihoda koji imaju obilježja profita. Naravno, za ovaj treći regulacijski aspekt vezana su i pitanja, odnosno problemi koliko dug regulacijski period ustanoviti, kada primijeniti jednostavne, a kada početi primjenjivati složene metode ekonomske regulacije.

Često je prisutna i dilema kada uvesti poticajnu regulaciju, kako složene regulacijske pristupe i mehanizme učiniti razumljivim, razvidnim i prihvatljivim svim sudionicima, naročito energetske subjektima koji iste trebaju primijeniti i korisnike ili kupce na koje se isti odnose, i končano, kako osigurati da ti mehanizmi u sukcesivnom slijedu rezultiraju stabilnom i efikasnom strukturom tarifa i sl. Za mrežne infrastrukturne sustave i prirodne monopolne energetske djelatnosti uz navedene treba dodati i pitanja odgovornosti i načina osiguravanja pomoćnih usluga sustava, pokrivanje troškova gubitaka, odgovornosti za pravovremen i dostatan razvoj i izgradnju sustava, te izgradnju dostatnih prekograničnih kapaciteta. Dodatno, operatori prijenosnog i distributivnog sustava imaju i odgovornosti u pogledu uključivanja i osiguravanja uvjeta za rad postrojenja koja koriste obnovljive izvore energije.

regulatory agencies differ. In some countries, the regulatory bodies have a crucial role in all the segments of the process, including the definition of the method for regulation and the methodology of the tariff system, supervision over operations and the auditing of financial indices and reports of energy entities, in-depth auditing and approval of expenditures, the definition and approval of crucial regulatory and macroeconomic parameters, the application of mechanisms for presentations and statements to the public, i.e. users and customers, about the amounts of tariff items etc. In other countries, the regulatory agencies are granted the authority and responsibility for only some of the stated rights, activities and responsibilities. The most frequent case is that a regulatory agency has the obligation and responsibility for the adoption of a suitable tariff system methodology, together with the supervision of the operations and expenditures of the regulated entities. The regulatory bodies in some countries issue an opinion to the corresponding ministries and governments regarding the amounts of tariff items, and in other countries they have the authority to determine or regulate the tariff items, which as a rule is the purpose for their establishment.

Finally, it is necessary to draw attention to the third aspect or level of the potential authorities and responsibilities of regulatory bodies. This third level consists of approaches to individual segments or problems of economic regulation, such as the problems of the criteria for the allocation and recognition of the level of operational costs, approval and recognition of investments in new facilities, plants and installations; capital costs, i.e. depreciation and investment return, determination of the suitable regulatory basis and rate of return on regulated property, recognition of the impact of inflation on costs and tariffs; the determination and recognition of other corrective factors on costs and tariffs, and finally the procedure in the event of revenue surpluses and deficits at the end of the regulatory period. A particular question refers to the attitude and procedure toward the categories of revenue that have recorded profits. Naturally, questions are connected with this third regulatory aspect, i.e. problems regarding how long a regulatory period should be established, when simple methods should be applied and when it is necessary to begin to apply complex methods of economic regulation.

There is often the issue of when to introduce incentive regulation, how to make complex regulatory approaches and mechanisms understandable, transparent and acceptable to all the participants, especially energy entities who must apply them and the users or customers to which they refer, how to assure that these mechanisms successively result in a stable and efficient tariff structure etc. For network infrastructure systems and naturally monopolistic

3 RESTRUKTURIRANJE ELEKTROENERGETSKOG SEKTORA, REGULACIJA I TARIFNI SUSTAVI U REPUBLICI HRVATSKOJ

U uvodnom dijelu Okruglog stola detaljno je izložen kontekst energetske zakonodavne okvira i procesa restrukturiranja elektroenergetskog sektora, odnosno otvaranja tržišta električne energije i razvoja i uspostavljanja novog regulatornog okvira u Republici Hrvatskoj [1], [2] i [3]. U tom kontekstu i okružju donesene su i objavljene metodologije tarifnih sustava, a tek treba utvrditi odgovarajuće stavke za prijenos i distribuciju električne energije te proizvodnju i opskrbu električnom energijom s izuzetkom za povlaštene kupce.

Naime, temeljem vrijedećih zakona Hrvatska energetska regulatorna agencija (u daljnjem tekstu: Agencija) ima obvezu i odgovornost, nakon pribavljenog mišljenja energetskih subjekata za obavljanje čijih djelatnosti se primjenjuje tarifni sustav i Ministarstva gospodarstva, rada i poduzetništva (u daljnjem tekstu: Ministarstvo), u sektoru električne energije donijeti metodologije tarifnih sustava, odnosno tarifne sustave bez visine tarifnih stavki, i to za: 1) proizvodnju električne energije, s iznimkom za povlaštene kupce, 2) opskrbu električnom energijom, s iznimkom povlaštenih kupaca, 3) prijenos električne energije, 4) distribuciju električne energije, 5) utvrđivanje naknade za priključak na prijenosnu i distribucijsku mrežu, te povećanje priključne snage, 6) pružanje usluga uravnoteženja električne energije u elektroenergetskom sustavu.

Prethodno navedene metodologije moraju omogućavati ulaganja potrebna za razvoj mreže i ostale zahtjeve sukladno postojećim zakonima.

Temeljem vrijedećih zakona energetski subjekt za obavljanje čijih djelatnosti se primjenjuje tarifni sustav podnosi prijedlog visine tarifnih stavki Ministarstvu, koje nakon pribavljenog mišljenja Agencije predlaže iznose tarifnih stavki Vladi Republike Hrvatske. Vlada Republike Hrvatske utvrđuje visinu tarifnih stavki. Agencija provodi nadzor primjene tarifnih stavki i svih ostalih naknada.

Na Okruglom stolu detaljno je izložen kontekst utvrđivanja i sadržaja metodologija tarifnih sustava za proizvodnju električne energije, s iznimkom za povlaštene kupce, opskrbu električnom energijom, s iznimkom povlaštenih kupaca, prijenos električne energije i distribuciju električne energije. U nastavku slijedi prikaz do sada vrijedećeg

energy activities, is also necessary to add questions of responsibility and the manner of assuring auxiliary services for the system, covering losses, responsibility for the timely and suitable development and construction of the system, and the construction of adequate cross-border capacities. Additionally, the transmission and distribution system operators have responsibilities in respect to the inclusion and assurance of the conditions for the operation of the plants that use renewable energy sources.

3 RESTRUCTURING OF THE ELECTRICITY SECTOR, REGULATION AND TARIFF SYSTEMS IN THE REPUBLIC OF CROATIA

In the introductory part of the Round Table Discussion, the context of the legislative framework for energy and the process of the restructuring of the electricity sector, i.e. opening the electricity markets and the development and establishment of a new regulatory framework in the Republic of Croatia, were presented in detail [1], [2] and [3]. In this context and environment, methodologies for tariff systems were adopted and published, and it is necessary to determine the corresponding tariffs for the transmission and distribution of electricity and production and supply of electricity with exceptions for eligible customers.

Based upon the prevailing legislation, the Croatian Energy Regulatory Agency (henceforth: the Agency) has the obligation and responsibility, after obtaining the opinions of the energy to entities to whose activities the tariff system is applied, and the Ministry of the Economy, Labor and Entrepreneurship (henceforth: the Ministry), to adopt methodologies for the tariff systems in the sector of electricity, i.e. the tariff systems without the amounts of the tariff items, and this for 1) the generation of electricity, with the exception of eligible customers, 2) the supply of electricity, with the exception of eligible customers, 3) the transmission of electricity, 4) the distribution of electricity, 5) the determination of connection fee to the transmission and distribution networks, and increasing the installed capacity, and vi) providing the services of balancing electricity within the electricity system.

The previously cited methodologies must facilitate the investment necessary for the development of the network and other requirements, pursuant to the existing legislation.

Based upon the prevailing legislation, the energy entities to whose activities the tariff system is ap-

integralnog tarifnog sustava koji je bio na snazi više godina, razloga za njegovu promjenu, te općih značajki pristupa i kontekst regulatornih mehanizama tarifnih sustava u Republici Hrvatskoj koji su doneseni i stupili na snagu u prosincu 2006. godine [4], [5], [6] i [7]. Naravno, kroz sve te sadržaje odražava se i specifična pozicija i uloga hrvatskog energetskeg regulatornog tijela – Agencije. Međutim, ogleđa se i težina problema konteksta, odnosno opsega i sadržaja regulacije energetskeg djelatnosti u sektoru električne energije.

Naime, nije naodmet ponoviti i činjenicu da se potreba za organizacijom Okruglog stola pojavila u momentu kada su u Republici Hrvatskoj donesena i stupila na snagu četiri nova tarifna sustava, bez visine tarifnih stavki, tj. metodologije za izračun zasebnih tarifnih stavki za djelatnosti proizvodnje, prijenosa, distribucije i opskrbe električnom energijom. Iste su do sada bile komponente jedinstvene tarife za integrirani sustav djelatnosti proizvodnje, prijenosa, distribucije i opskrbe električnom energijom, odnosno svih usluga povezanih s opskrbom električnom energijom krajnjih kupaca. Sukladno jasnoj zakonskoj obvezi razdvajanja navedenih djelatnosti, izraženih i kroz pristup spomenutim metodologijama tarifnih sustava, u tijeku su poslovi vezani uz izračun i donošenje tarifnih stavki za navedene temeljne energetske djelatnosti. Primjenom spomenutih metodologija, odnosno donošenjem i stupanjem na snagu novih tarifnih stavki elektroenergetski sektor i elektroenergetsko gospodarstvo Republike Hrvatske ući će u prvo regulatorno razdoblje.

Stoga je i za regulatorno tijelo, za predstavnike reguliranih djelatnosti, jednako tako i za stručnu javnost od velike važnosti i pomoći bilo raspraviti neka pitanja i dileme iz predmetne problematike, i to upravo na skupu s predstavnicima raznih zainteresiranih strana. Poglavitito je bilo važno čuti iskustva i stavove relevantnih eksperata iz europskih regulatornih tijela i zemalja s višegodišnjim iskustvom u ekonomskoj regulaciji, bilo da se radi o dugogodišnjim članicama EU, ili zemljama koje su tek nedavno postale članice EU. U uvodnom dijelu predstavnici Agencije i reguliranih subjekata u Republici Hrvatskoj detaljno su predstavili ulogu Agencije kao regulatornog tijela, odabrane i primijenjene regulacijske pristupe i mehanizme, odnosno sadržaje i elemente metodologije tarifnih sustava koji su u Republici Hrvatskoj doneseni u prosincu 2006. godine za energetske djelatnosti prijenosa i distribucije električne energije te proizvodnje i opskrbe električnom energijom s iznimkom za povlaštene kupce [8], [9] i [10]. Okrugli stol pružio je izvrsnu prigodu za usporedbu i diskusiju hrvatskog zakonodavnog i regulatornog okružja, odnosno regulacijskog pristupa i meha-

plied submit a proposal for the amounts of the tariff items to the Ministry, which after obtaining the opinion of the Agency proposes the amounts of the tariff items to the Government of the Republic of Croatia. The Government of the Republic of Croatia determines the amounts of the tariff items. The Agency supervises the application of the tariff items and all other compensation.

At the Round Table Discussion, the context for the determination and content of the methodology of the tariff systems for the generation of electricity was presented in detail, with an exception for favored customers, as well as the supply of electricity, with an exception for favored customers, the transmission of electricity and the distribution of electricity. A presentation follows of the valid integrated tariff system that was in force for many years, the reasons for changing it, and the general characteristics of the approach and context of the regulatory mechanisms of the tariff system in the Republic of Croatia that were adopted in December 2006 and have gone into effect [4], [5], [6] and [7]. Naturally, the specific position and role of the Croatian Energy Regulatory Agency is reflected in all of this. However, the difficulty with the context of the problem, i.e. the range and content of the regulations of the energy activities in the electricity sector, are also reflected.

It is necessary to reiterate the fact that the need for the organization of the Round Table Discussion came at the moment when the Republic of Croatia had adopted and placed into force four new tariff systems, without specifying the amounts of the tariff items, i.e. the methodology for the calculation of the separate tariff items for the activities of the generation, transmission, distribution and supply of electricity. Until now, they were components of a single tariff for the integrated system of the activities of the generation, transmission, distribution and supply of electricity, i.e. all the services connected with the supply of electricity to final customers. Pursuant to the clear legal obligation for the separation of these activities, also expressed through the approach of the previously mentioned methodologies of the tariff system, work is in progress in connection with the calculation and adoption of the tariff items for these basic energy activities. Through the application of the previously mentioned methodologies, i.e. the adoption and going into force of the new tariff items of the electricity sector and the economy of the Republic of Croatia, a trial regulatory period will be entered.

Therefore, for the regulatory agency, the representatives of the regulated entities, and the professional public, it would be of great importance and benefit to discuss several questions and dilemmas regard-

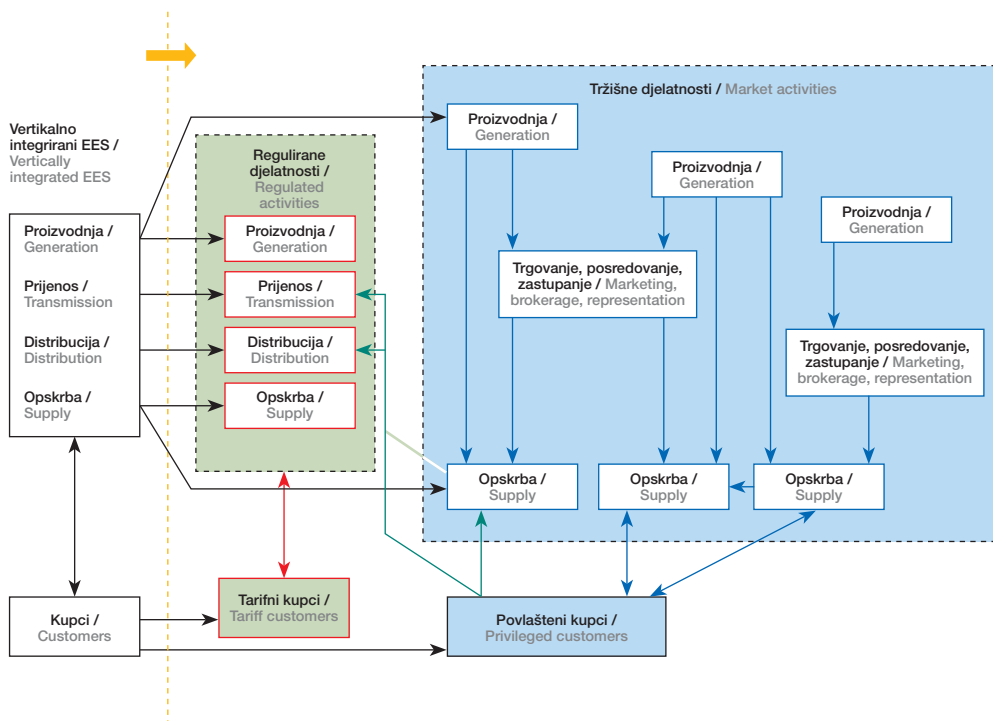
nizma, uključujući i sadržaje i elemente metodologije tarifnih sustava, s odgovarajućim okružjima, ulogama regulatornih tijela, odnosno pristupima, sadržajima i elementima regulacije i tarifnih sustava u Francuskoj, Austriji, Sloveniji i Mađarskoj i Hrvatske [11], [12], [13] i [14].

Na slici 1 prikazan je tijek procesa restrukturiranja elektroenergetskog sektora i tržišta električne energije, iz njegove vertikalno integrirane strukture u strukturu koja u svezi s tržišnim djelatnostima proizvodnje električne energije i opskrbe električnom energijom primarno podrazumijeva konkurentno okružje i tržišnu utakmicu, a glede monopolnih mrežnih infrastrukturnih sustava regulirano okružje po principu reguliranog pristupa treće strane, dakle po tarifama i ostalim uvjetima pristupa koji su unaprijed utvrđeni, razvidni i nepristrani. Specifična struktura regulacije i tarifnih sustava uvjetovana je zakonom utvrđenom obvezom javne usluge opskrbe električnom energijom tarifnih kupaca. Očito je da će tu specifičnu strukturu u budućnosti značajno uvjetovati dinamika otvaranja tržišta električne energije, tj. brzina kojom će se segment opskrbe i obveza prema tarifnim kupcima smanjivati, a segment povlaštenih kupaca rasti.

ing these problems at a meeting with the representatives of various interested parties. It would be especially important to hear about the experiences and positions of the relevant experts from the European regulatory bodies and countries with many years of experience in economic regulation, whether these countries that have been members of the EU for many years or have only recently become members of the EU. In the introductory section, representatives of the Agency and the regulated entities in the Republic of Croatia presented the role of the Agency in detail as a regulatory body, the chosen and applied regulatory approaches and mechanisms, i.e. the contents and elements of the methodologies of the tariff systems that were adopted in the Republic of Croatia in December 2006 for the energy activities of the generation of electricity, with an exception for favored customers, the supply of electricity, with the exception of favored customers, the transmission of electricity and the distribution of electricity [8], [9] and [10]. The Round Table Discussion provided an excellent opportunity for the comparison and discussion of Croatian legislation and the regulatory environment, i.e. the regulatory approach and mechanisms, including the contents and elements of the methodology of the tariff systems, with the corresponding environments, roles of the regulatory bodies, i.e. the approaches, contents and elements of the regulations and tariff systems in France, Austria, Slovenia, Hungary and Croatia [11], [12], [13] and [14].

In Figure 1, the process of the reconstruction of the electricity sector and the electricity market is presented, from its vertically integrated structure in a structure that in connection with the market activities of the generation of electricity and the supply of electricity is primarily understood to mean the competitive environment and market competition, and regarding the monopolistic network infrastructure systems, the regulated environment according to the principle of the third party access according to tariffs and other conditions of access that have been determined in advance, and are transparent and nondiscriminatory. The specific structure of the regulatory and tariff systems was conditioned by the legally established public service obligation of the supply of electricity to tariff customers. It is evident that this specific structure will significantly affect the dynamics of the opening of the electricity market in the future, i.e. the speed at which the supply segment and the obligation toward tariff customers will be reduced and the segment of privileged customers will grow.

Slika 1
 Restrukturiranje elektroenergetskog sektora i tarifni sustavi u Hrvatskoj
 Figure 1
 Restructuring of the electrical energy sector and the tariff systems in Croatia

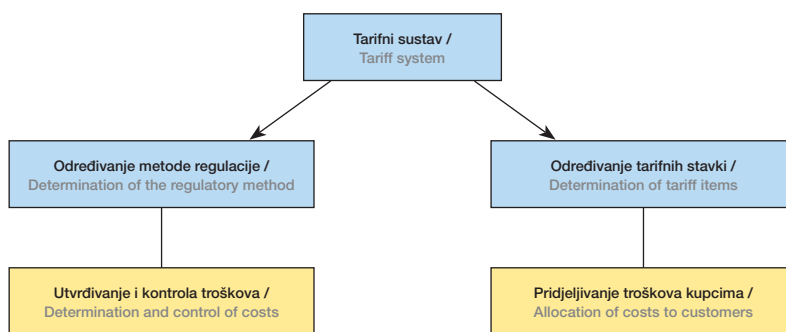


S druge strane izložena struktura ukazuje na to da je realno očekivati brze promjene konteksta, ali i sadržaja regulacije. Nije beznačajno ukazati i na dvojnost, bolje rečeno složenost regulatornog sadržaja koji s jedne strane proizlazi iz potrebe da se definiraju sadržaji i razrađuju specifični elementi ekonomske regulacije za segment tzv. prirodnih monopolnih djelatnosti prijenosa i distribucije električne energije, koje su u pravilu svugdje ujedno i regulirane djelatnosti, a s druge strane iz potrebe da se, premda ipak privremeno i do potpunog otvaranja tržišta električne energije, razvijuju i uvedu regulacijski mehanizmi za tržišne djelatnosti proizvodnje i opskrbe električnom energijom. Tržišne djelatnosti općenito i općeprihvaćeno trebaju biti izložene konkurenciji. To samo svjedoči o težini zadatka i izazova s kojima se suočava regulatorno tijelo, ali i regulirani subjekti, kada je proizvodnju i opskrbu potrebno prevesti iz stanja monopola u stanje konkurencije.

Na slici 2 prikazana je osnovna struktura, odnosno sadržaji novih tarifnih sustava kako ih definira novi zakonodavni okvir u Republici Hrvatskoj.

On the other hand, the presented structure indicates that it is realistic to anticipate rapid changes in the context as well as the contents of regulation. It is necessary to mention the duality, better to say the complexity, of the regulatory content that from the one side issues from the need to define the contents and work out the specific elements of the economic regulation of this segment, the so-called naturally monopolistic activities of the transmission and distribution of electricity, which as a rule are also regulated activities everywhere; and from the other side the need for, albeit temporarily and until the complete opening of the electricity market, the development and introduction of the regulatory mechanisms for the market activities of the generation and supply of electricity. Market activities should generally be exposed to competition. This only testifies to the difficulty of the task and the challenges confronting the regulatory agency, but also the regulated entities, when generation and supply must be changed from a state of monopoly to a state of competition.

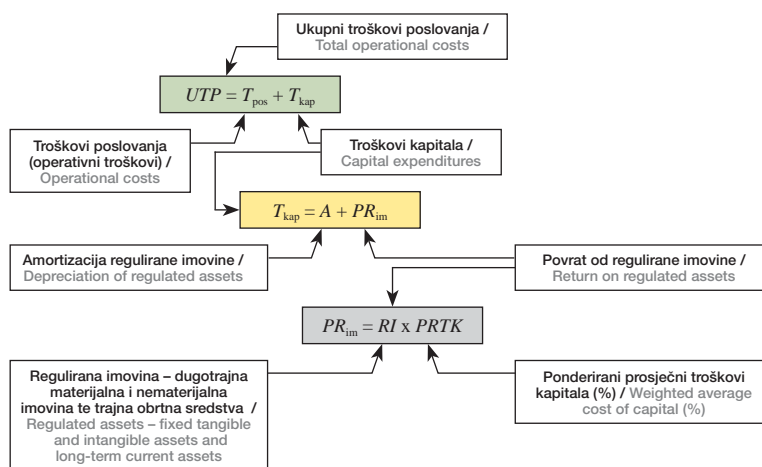
In Figure 2, the basic structure, i.e. content, of the new tariff systems is presented as defined by the new legislative framework in the Republic of Croatia.



Slika 2
Osnovna struktura i sadržaj novih tarifnih sustava
Figure 2
The basic structure and content of the new tariff systems

Ključni moment ili sadržaj regulacijskog procesa u kojem se definira pristup novom tarifnom sustavu je izbor osnovnog pristupa metodi regulacije (slika 3).

The crucial moment or content of the regulatory process in which the access to the new tariff system is defined is the selection of the basic approach to the method of regulation (Figure 3).



Slika 3
Izbor, sadržaj i mehanizam regulacije u novim tarifnim sustavima
Figure 3
The selection, content and mechanism of regulation in the new tariff systems

Ocjenjujući realnim i razumnim da se na početku prvog regulatornog razdoblja, dakle kada se po prvi put izlazi iz dugogodišnje integrirane tarifne strukture i jedinstvenih tarifnih stavki za sve energetske djelatnosti u sektoru električne energije i prelazi na odvojene pristupe i zasebne tarifne stavke za svaku od tih djelatnosti, odabere što jednostavniji, lakše primjenjiv i provedivi pristup i mehanizam, odabrana je opće poznata metoda priznatih troškova poslovanja, pri čemu se regulacija zapravo temelji i veže za kriterij stope povrata uloženog kapitala (eng. *Cost Plus* ili *Rate-of Return Regulation*). Dakle, slijedilo se odgovarajuće iskustvo i praksu više europskih zemalja i njihovih regulatornih tijela, koja su u početku procesa uvodila jednostavne regulacijske mehanizme, a

At the beginning of the first regulatory period, i.e. when for the first time the integrated tariff structure and single tariff items for all the energy activities in the power system will be replaced in transition to separate approaches and separate tariff items for each of these activities, it is realistic and reasonable to choose the simplest possible, easily applicable and feasible approach and mechanism. The generally known method of recognized costs of operations has been chosen, so that the regulation is actually based upon and connected with the criterion of the rate of return on investments. Furthermore, the corresponding experience and practice have been followed of several European countries and their regulatory agencies, which introduced simple regulatory mechanisms at the beginning of the process and then,

zatim s vremenom, kako su svi sudionici procesa stjecali odgovarajuća znanja i iskustva, uvodili sve složenije mehanizme, da bi danas primjenjivali složene mehanizme poticajne regulacije, ali i vrlo složene i zahtjevne procedure nadzora i kontrole svakog segmenta tih mehanizama. Tako npr. često su u regulacijske mehanizme uključeni neki od makroekonomskih gospodarskih parametara i pokazatelja, koji traže vrijeme za složenu i dugotrajnu analizu i elaboraciju. U pravilu se pokazuje da nije niti jednostavno niti opravdano bez ograde koristiti istovrsne pokazatelje primijenjene u drugim zemljama, pa čak niti prenositi i koristiti istovrsne pokazatelje primijenjene u drugim gospodarskim sektorima iste zemlje. Pogotovo je oprez nužan kada su u pitanju razina i struktura, odnosno način utvrđivanja odgovarajućih pokazatelja tržišnih rizika u svezi s ulaganjima, vlastitim kapitalom, dugovanjima i slično.

Zakon utvrđuje da se tarifni sustavi temelje na opravdanim troškovima poslovanja, održavanja, zamjene, izgradnje ili rekonstrukcije objekata i zaštite okoliša, uključujući razuman rok povrata sredstava od investicija u energetske objekte, uređaja i mreža, odnosno sustava, te moraju biti nepristrani i razvidni. Ujedno, tarifni sustavi trebaju poticati mehanizme za poboljšanje energetske učinkovitosti i upravljanje potrošnjom, uključujući i povećano korištenje obnovljivih izvora energije. Dakle, kod odabira temeljnog pristupa regulacije bilo je nužno voditi računa da prihod ostvaren primjenom novih tarifnih stavki treba pokriti sve priznate ukupne troškove poslovanja, dakle priznate operativne troškove i troškove kapitala, od kojih troškove kapitala čine amortizacija regulirane imovine i povrat od regulirane imovine.

U hrvatskoj literaturi često se miješaju dva različita pojma:

- kapitalni troškovi (*CAPEX, Capital Expenditures*),
- trošak kapitala (*CC, Cost of Capital, odnosno WACC, Weighted Average CC*).

Reguliranom energetsom subjektu u općem slučaju treba omogućiti nadoknadu svih (priznatih) operativnih troškova, amortizacije, te troškova koje potražuju vlasnici financijskog kapitala, a to su:

- kamate i prinosi emitiranih korporacijskih obveznica,
- oportunitetni trošak vlasnika dioničarskog kapitala.

with time, when all the participants in the process had acquired the appropriate knowledge and experience, introduced progressively complex mechanisms in order to apply more complex mechanisms and incentive regulation today, but also highly complex and demanding procedures for the supervision and control of each segment of these mechanisms. Thus, for example, regulatory mechanisms frequently included some of the macroeconomic parameters and indices, which require time for complex and lengthy analysis and elaboration. As a rule, it has been shown that it is neither simple nor justifiable to use the same types of indices applied in other countries without limitation, or even to transfer and use the same types of indices applied in the other economic sectors of the same country. Caution is particularly necessary when the level and structure are in question, i.e. the manner of determining the corresponding indices of market risks in connection with investments, equity capital, debts etc.

The law establishes that the tariff systems are based upon the justified costs of the operations, maintenance, replacement, construction or reconstruction of facilities and environmental protection, including a reasonable period for the return of investments in energy facilities, equipment and networks, i.e. the systems, and must be nondiscriminatory and transparent. At the same time, tariff systems must promote mechanisms for the improvement of energy efficiency and the management of consumption, including the increased use of renewable energy sources. Therefore, in the selection of the basic approach to regulation, it was necessary to take into account that the income generated through the application of the new tariff items should cover all the known overall operational costs, i.e. the recognized operational costs and capital expenditures, which consist of the depreciation of the regulated property and the return from the regulated property.

In the Croatian literature, two different concepts are often confused:

- capital expenditures (*CAPEX*),
- cost of capital (*CC, Cost of Capital, or WACC, Weighted Average CC*).

Through the regulation of an energy entity in the general case, it is necessary to facilitate compensation for all (recognized) operative costs, depreciation and expenditures claimed by the owners of capital, as follows:

- interest and the income from corporate bonds issued,
- opportunity costs for stockholders.

Stopa povrata koja omogućuje naknadu troškova iz navedene dvije kategorije zove se ponderirani prosječni trošak kapitala (WACC).

Po odabranom pristupu i metodi regulacije, određivanje visine tarifnih stavki za buduću regulacijsku godinu zasniva se na sljedećim troškovima:

- priznatim ostvarenim troškovima poslovanja iz prethodne regulacijske godine,
- ostvarenim i procijenjenim troškovima poslovanja za sadašnju regulacijsku godinu, te
- prihvaćenim planskim vrijednostima troškova za razmatranu buduću regulacijsku godinu.

U reguliranu imovinu, temeljem koje se primjenom odgovarajuće priznate stope ponderiranog prosječnog troška kapitala računa povrat ili prinos od regulirane imovine, čine dugotrajna materijalna i nematerijalna imovina te trajna obrtna sredstva. Izložena osnovna struktura ili pristup primjenjuje se na sve djelatnosti: proizvodnju, prijenos, distribuciju i opskrbu električnom energijom.

Specifična temeljna struktura i osnovne stavke troškova poslovanja u svezi s proizvodnjom električne energije prikazana je na slici 4, u svezi s prijenosom električne energije na slici 5, s odgovarajućom posebnom razradom potrebnih podataka koja je prikazana na slici 6, u svezi s distribucijom električne energije na slici 7, te u svezi s opskrbom električnom energijom na slici 8.

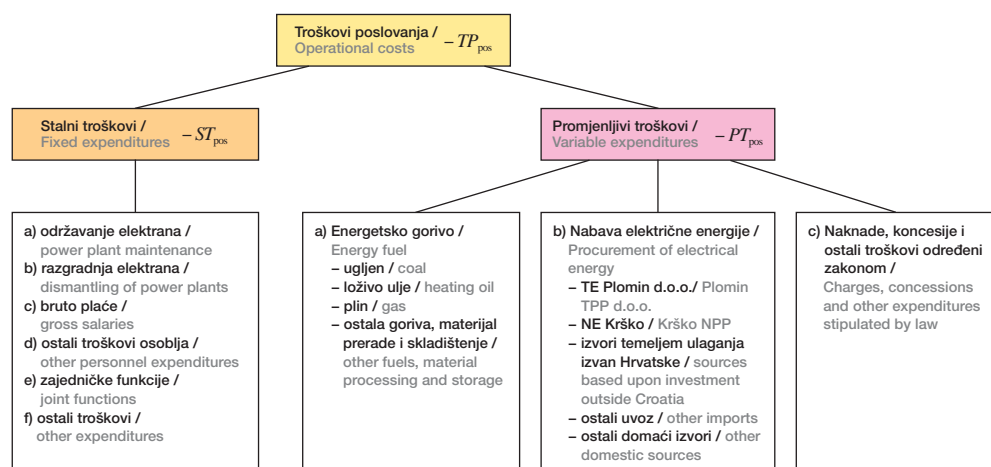
The rate of return that makes compensation for costs from the two cited categories possible is known as the weighted average cost of capital (WACC).

According to the selected approach and method of regulation, the determination of the level of the tariff items for the subsequent regulated year is based upon the following expenditures:

- the recognized realized costs of operations during the previous regulated year,
- the realized and estimated costs of operations for the current regulated year, and
- the accepted planned values of expenditures for the analyzed subsequent regulated year.

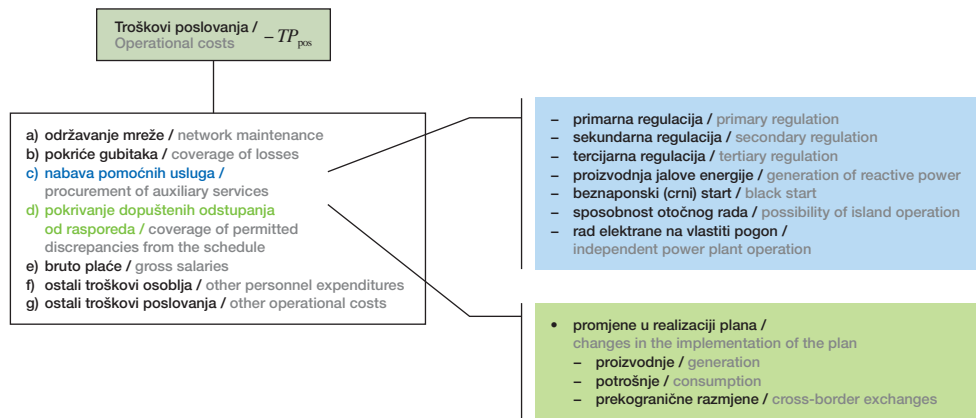
For regulated property, according to which the corresponding recognized rate of the weighted average cost of capital is applied, the return or revenue is calculated and consists of fixed tangible assets, intangible assets and permanent current assets. The basic structure or approach presented is applied to all activities: the generation, transmission, distribution and supply of electricity.

The specific fundamental structure and basic items of operational costs in connection with the generation of electricity are presented in Figure 4, in connection with the transmission of electricity in Figure 5, with the corresponding separate processing of the necessary data presented in Figure 6, the distribution of electricity in Figure 7 and in connection with the supply of electricity in Figure 8.

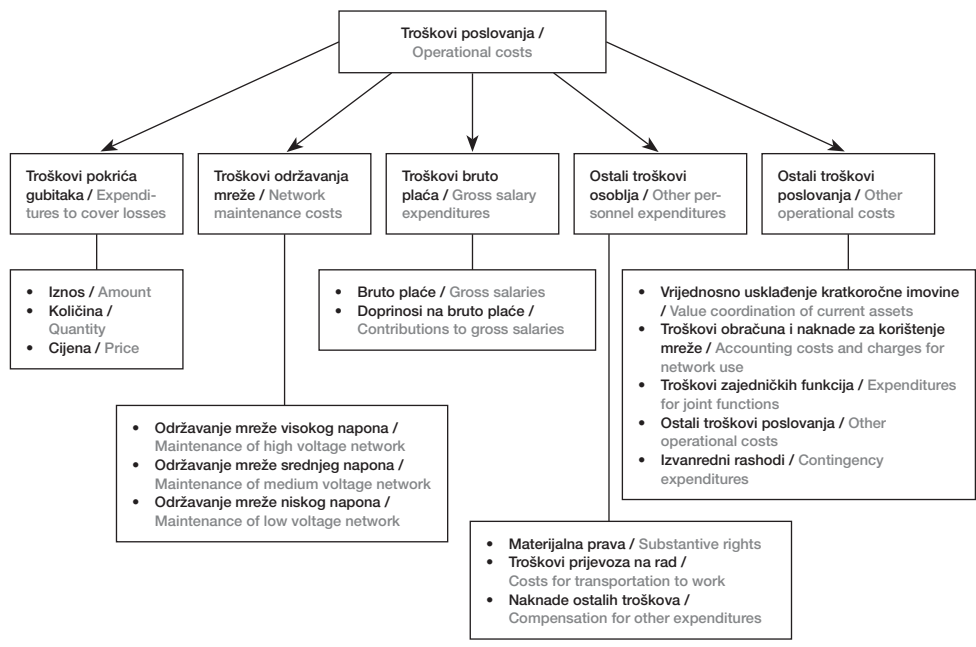


Slika 4
Tarifni sustav za proizvodnju električne energije (struktura troškova)
Figure 4
The tariff system for the production of electrical energy (the structure of expenditures)

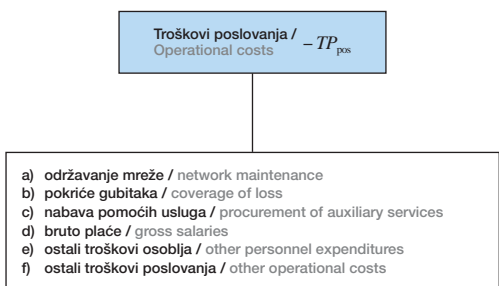
Slika 5
 Tarifni sustav za prijenos električne energije (struktura troškova)
 Figure 5
 The tariff system for the transmission of electrical energy (the structure of expenditures)

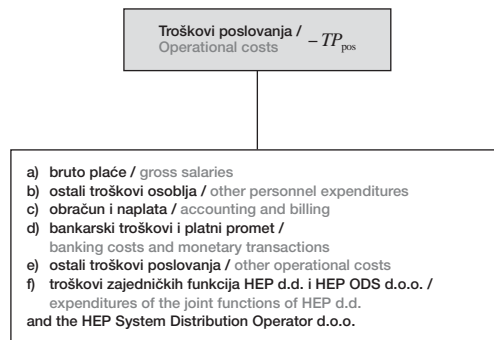


Slika 6
 Tarifni sustav za prijenos električne energije (struktura potrebnih podataka)
 Figure 6
 The tariff system for the transmission of electrical energy (the structure of the required data)



Slika 7
 Tarifni sustav za distribuciju električne energije (struktura troškova)
 Figure 7
 The tariff system for the distribution of electrical energy (the structure of expenditures)





Slika 8
 Tarifni sustav za opskrbu električnom energijom (struktura troškova)
Figure 8
 The tariff system for the supply of electrical energy (the structure of expenditures)

Glede prijenosa električne energije, bolje rečeno HEP Operatora prijenosnog sustava problematiku pristupa regulaciji, odnosno tarifnom sustavu još složenijima čine i sljedeća pitanja, odnosno problemi novog okružja, kao što su:

- poslovanje HEP Operatora prijenosnog sustava na otvorenom tržištu,
- način utvrđivanja i tretmana troškova nastalih zbog prekograničnih tranzita električne energije,
- potreba da se u kratkom vremenu razradi trogodišnji plan razvoja i izgradnje u novom okružju i po novoj metodologiji (problem okvira i temeljnih odrednica za donošenje plana u znatno restrukturiranom okružju u koji se uvode tržišni odnosi, stvaraju pretpostavke za regulirani pristup trećih strana mrežama i uslugama sustava, ulaze novi sudionici, stvara novo poticajno okružje za veće korištenje obnovljivih izvora energije, jednom riječju mijenjaju dosadašnji tradicionalni odnosi i struktura odgovornosti),
- kako napraviti djelotvornu analizu osjetljivosti cijene za korištenje prijenosne mreže, koja sada postaje zasebna stavka,
- kako osigurati pomoćne usluge sustava i na razvidan i pravedan način pridijeliti ih korisnicima i naplatiti,
- kako obuhvatiti i na djelotvoran način analizirati utjecaj vjetroelektrana i drugih postrojenja koja koriste obnovljive izvore energije na pogonske parametre mreže, ali i na troškove korištenja prijenosne mreže,
- kako ustanoviti djelotvoran mehanizam proračuna troškova upravljanja zagušenjima mreže,
- da li ustanoviti odvojeno računovodstvo i kako, itd.

Glede distribucije električne energije, bolje rečeno HEP Operatora distribucijskog sustava problematiku pristupa regulaciji i tarifnom sustavu dodatno prati problematika nestandardnih usluga: njihova

Regarding the transmission of electricity, better to say the HEP Transmission System Operator, the problem of the approach to regulation, i.e. the tariff system, is further complicated by questions and problems of the new environment, including the following:

- the operations of the HEP Transmission System Operator on the open market,
- the manner of the determination and treatment of costs occurring due to the cross-border transit of electricity,
- the necessity of preparing a three-year development and construction plan in a short time within the new environment and according to new methodology (the problem of the framework and fundamental determinants for the adoption of the plan in the significantly restructured environment into which market relations are being introduced, creating the prerequisites for the regulated access of third parties to the system networks and services, the entry of new participants, the creation of a new incentive environment for the increased use of renewable energy sources, i.e. the traditional relationships and structure of responsibilities are changing),
- how to prepare an effective analysis of price sensitivity for the use of the transmission network, which presently represents a separate item,
- how to secure auxiliary system services, allocate them to users and charge for them in a transparent and fair manner,
- how to include and efficiently analyze the impact of wind power plants and other facilities that use renewable energy sources on the network operating parameters, but also on the costs of using the transmission network,
- how to establish an efficient mechanism for calculating the costs of the management of network congestion,
- whether and how to establish separate accounting etc.

Regarding the distribution of electricity, better to say the HEP Distribution System Operator, the problem of

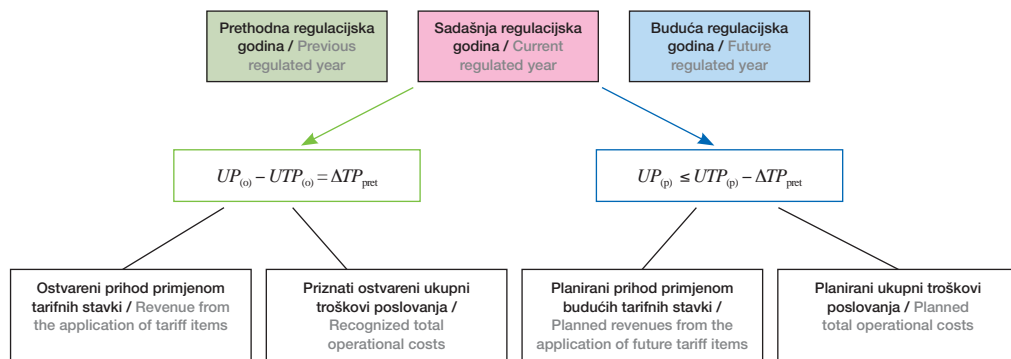
knjigovodstvenog praćenja po izdvojenim kontima i njihova odvajanja od standardnih usluga kod praćenja troškova. Problem je i rasporeda troškova prema njihovoj vrsti te utvrđivanja elemenata za proračun povrata na reguliranu imovinu.

Tijek procesa utvrđivanja i predlaganja visine tarifnih stavki prikazan je na slici 9.

the approach to the regulation and tariff system is additionally accompanied by the problem of nonstandard services; bookkeeping records according to separate accounts and their separation from "standard" services in monitoring expenditures. There is also the problem of the distribution of expenditures according to their type and the determination of the elements for the calculation of returns on regulated property.

The process for the determination and proposal of the amounts of the tariff items is presented in Figure 9.

Slika 9
 Novi tarifni sustavi
 (proces predlaganja
 visine tarifnih stavki)
 Figure 9
 New tariff systems (the
 process of proposing the
 amounts of tariff items)



Prethodna godina je godina koja prethodi godini za koju se donose tarifne stavke za odgovarajuću energetska djelatnost, a za koju su revidirani i objavljeni financijski podaci, poznat ukupni prihod primjenom vrijedećih tarifnih stavki i poznati ostvareni ukupni troškovi poslovanja. Sadašnja regulacijska godina je tekuća godina u kojoj se podnosi prijedlog promjene visine tarifnih stavki za buduću regulacijsku godinu. Prijedlog promjene visine tarifnih stavki za odgovarajuću energetska djelatnost podnosi energetski subjekt na koji se te tarifne stavke odnose. Energetski subjekt dužan je uz prijedlog za promjenu visine tarifnih stavki dostaviti sve podatke potrebne za utvrđivanje troškova poslovanja, posebno financijsko izvješće za prethodnu regulacijsku godinu potvrđeno od ovlaštenog neovisnog revizora te plan poslovanja i plan razvoja i izgradnje (za sadašnju i buduću regulacijsku godinu). Navedeni dokumenti moraju biti potpisani od ovlaštene osobe energetskog subjekta i ovjereni pečatom tvrtke. Na zahtjev Ministarstva ili Agencije energetski subjekt dužan je dostaviti i druge podatke potrebne za utvrđivanje promjene visine tarifnih stavki te omogućiti uvid u pripadnu dokumentaciju. Prijedlog promjene visine tarifnih stavki za buduću regulacijsku godinu energetski subjekt dužan je dostaviti u sadašnjoj regulacijskoj godini, a nakon što za nju budu po-

The previous year is the year that precedes the year for which tariff items are adopted for the corresponding energy activity, and for which the financial data are revised and published: the known total revenue through the application of the valid tariff items and the known realized total operational costs. The current regulatory year is the current year in which a proposal is submitted for changing the amount of tariff items for the subsequent regulatory year. A proposal for a change in the amount of tariff items for the corresponding energy activity is submitted by an energy entity to which the tariff items apply. Together with the proposal for the change in the amount of tariff items, the energy entity is required to submit all data necessary for the determination of the operational costs, especially the financial report for the previous regulatory year audited by an authorized independent auditor, a plan of operations, and a plan of development and construction (for the current and future regulatory years). These documents must be signed by the authorized person of the energy entity and stamped with the company seal. At the request of the Ministry or Agency, the energy entity is required to submit other data necessary for determining the changes in the amounts of tariff items and facilitate the inspection of the corresponding documentation. A proposal for changes in the amount of tariff items for the subsequent regulatory year must be submit-

znati polugodišnji ukupni troškovi poslovanja. I konačno, energetska subjekt dužan je predložiti promjenu visine tarifnih stavki uz uvjet da očekivani prihod u budućoj regulacijskoj godini, izračunat prema odgovarajućem tarifnog sustava, ne prelazi prihvaćene planirane ukupne troškove poslovanja, korigirane za eventualna opravdana ili odobrena odstupanja.

Pored prethodnog bitno je istaći da su utvrđene i sljedeće obveze energetskih subjekata:

- rok za usklađivanje poslovanja s odredbama tarifnog sustava je šest mjeseci,
- obveza dostavljanja podataka, posebno plana poslovanja te plan razvoja i izgradnje, odnosno trogodišnjeg plana razvoja i izgradnje, kojeg subjekt donosi uz suglasnost Agencije, i to:
 - do 31. 5. sadašnje regulacijske godine – financijska izvješća za prethodnu regulacijsku godinu potvrđena od ovlaštenog neovisnog revizora,
 - do 30.11. sadašnje regulacijske godine - planovi poslovanja.

4 ZAKLJUČCI OKRUGLOG STOLA O ULOZI REGULATORNOG TIJELA U DONOŠENJU TARIFNIH SUSTAVA

Nakon svih prezentacija i rasprava u kojima su sudjelovali predstavnici regulatornih tijela iz Francuske, Austrije, Slovenije, Mađarske i Hrvatske, te predstavnici Hrvatske elektroprivrede d.d., odnosno predstavnici energetskih subjekata u Republici Hrvatskoj za koje se donose i primjenjuju odgovarajući tarifni sustavi, utvrđeni su zaključci Okruglog stola. Ti zaključci su bili kako slijedi:

- 1)** Okrugli stol uspješno je organiziran i proveden i u potpunosti je opravdao razloge organiziranja, ponudivši niz odgovora na važna pitanja i dileme glede pristupa, sadržaja i forme regulacije, provedbenih procedura i metodologija regulacije, metodologija tarifnih sustava i strukture samih tarifnih stavki. Naravno, sudionici nisu propustili naglasiti i pojasniti niz provedbenih ili proceduralnih, dakle pojavnih i praktičnih problema s kojima se susreću regulatorna tijela i regulirani energetska subjekti, naročito oni koji su nositelji monopolnih djelatnosti i obveza javnih usluga.
- 2)** Predavači su sudionike Okruglog stola uveli u predmetnu problematiku i ukazali im na opću prisutnost sličnih pitanja i dilema u svim zemlja-

ted by an energy entity during the current regulatory year, and after it knows the total operational costs for the first half of the year. Finally, the energy entity is required to propose a change in the amount of tariff items under the condition that the anticipated revenue in the subsequent regulatory year, calculated according to the corresponding tariff system, does not exceed the accepted planned total operational costs, corrected for eventual justified or authorized discrepancies.

In addition to the above, it is essential to emphasize that the following obligations of energy entities have also been determined:

- the deadline for the coordination of operations with the provisions of the tariff system is six months,
- the obligation for the submission of data, especially a plan of operations and a plan for development and construction, i.e. a three-year plan for development and construction, that the subject adopts with the approval of the Agency, as follows:
 - by May 31 of the current regulatory year – financial reports for the previous regulatory year that have been audited by an authorized independent auditor, and
 - by November 30 of the current regulatory year – operational plans.

4 CONCLUSIONS OF THE ROUND TABLE DISCUSSION ON THE ROLE OF THE REGULATORY BODY IN THE ADOPTION OF NEW TARIFF SYSTEMS

Following all the presentations and discussions in which the participants were the representatives of the regulatory agencies of France, Austria, Slovenia, Hungary and Croatia; representatives of Hrvatska elektroprivreda d.d., and representatives of the energy entities in the Republic of Croatia for whom the corresponding tariff systems are being adopted and applied, conclusions were reached by the Round Table, as follows:

- 1)** The Round Table was organized and conducted successfully. It fully justified the reasons for which it was held, providing a range of answers to important issues and dilemmas related to the approach, regulatory contents and form, implemented procedures, regulatory methodology, tariff system methodology and the structure of the tariff items themselves. The participants emphasized and explained a range of implementational or procedural issues, i.e. actual and practical issues that the regulatory agencies and regulated entities encounter, especially those with monopolies and public service obligations.

ma, kod svih regulatornih tijela i svih reguliranih energetske subjekata. Naravno, u zemljama u kojima su odgovarajuća energetska regulatorna tijela osnovana tek nedavno, u kojima određeni procesi restrukturiranja i novog organiziranja elektroenergetskog sektora nisu u potpunosti dovršeni, u kojima je proces otvaranja tržišta električne energije i uvođenje konkurencije tek u početnoj fazi, i konačno u kojima odgovarajuće makroekonomske pokazatelje i utjecajne regulatorne parametre nije nimalo lako i jednostavno utvrditi, puno je veći broj i pitanja i dilema. Oblik prenošenja znanja i stečenih iskustava, kakav je uostalom ponudio i ovaj Okrugli stol, ukazuje na nužnost i potrebu organizacije istih ili sličnih formi i sadržaja rada na nacionalnoj, regionalnoj, pa i široj međunarodnoj razini, bilo da se radi o okruglim stolovima, radioionicama, seminarima ili konferencijama.

3) Okrugli stol naglasio je da je bez obzira na različita iskustva i dinamiku procesa, i bez obzira na opći zakonodavni i gospodarski sustav iz kojeg dolazi, odgovarajući vrijedeći zakonodavni okvir u svakoj državi mora osigurati uvjete za nezavisan, nepristran i razvidan rad energetskog regulatornog tijela. Unutar toga zakonodavnog okvira nadležno državno tijelo i regulatorno tijelo imaju obvezu i dužnost izgraditi i primijeniti utemeljene, realne, razvidne i lako provedive mehanizme i metodologije regulacije, odnosno metodologije tarifnih sustava. O raznim oblicima ili sadržajima, političkim i gospodarskim utjecajima nužno je voditi računa utoliko što su oni stalno prisutni, što su izrazi raznih nacionalnih strategija ili interesa, dakle predstavljanju važan element realnog okruženja u kojem se odvija život i rad regulatornog tijela i reguliranih energetske subjekata, i u kojem se uspostavlja tržište električne energije.

4) Okrugli stol naglasio je suštinsku uvjetovanost problema regulacije reguliranih energetske djelatnosti, naročito monopolnih mrežnih sustava i javnih usluga dinamikom otvaranja i načinom uređenja tržišta električne energije. Pravo pristupa mrežama i pomoćnim uslugama sustava prvo je u nizu problema s kojima se treba susresti. Nema dvojbe da se pravo pristupa treba i mora urediti unaprijed kroz odgovarajuća mrežna pravila i tehničke uvjete, ali da bi se moglo ostvarivati u nepristranom, razvidno i nediskriminirajućem okruženju, nužno je unaprijed utvrditi i objaviti i tehničke i ekonomske uvjete priključka i naknade za korištenja prijenosne i distribucijske mreže, te uvjete i naknade za korištenje pomoćnih usluga sustava, naravno u slučaju da su iste obuhvaćene odgovarajućim regulatornim okvirom.

5) Okrugli stol jasno je pokazao prednost u iskustvu i rješenjima regulatornih tijela, odnosno

2) The lecturers introduced the issues to the Round Table Discussion participants and called attention to the general presence of similar questions and dilemmas in all the countries, regulatory agencies and regulated electrical power entities. Naturally, there are many more questions and dilemmas in countries where the energy regulatory agencies have only been recently established and certain processes of the restructuring and reorganizing of the electricity sector have not been fully completed, where the processes of opening the electricity market and the introducing of competition are in the initial phases and, finally, where the corresponding macro-economic indices and influential regulatory parameters are not easy to determine. The form of the transfer of knowledge and acquired experience, as provided at this Round Table Discussion, indicates the necessity for organizing similar events at the national, regional and even international levels, in the form of round table discussions, workshops, seminars or conferences.

3) The Round Table Discussion emphasized that, regardless of differences in experiences and process dynamics, and regardless of the general legal and economic system, the appropriate valid and transparent legal framework in each country must provide conditions for the independent, nondiscriminatory and transparent operation of the energy regulatory agency. Within this legal framework, the authorized government agency and regulatory agency have the obligation and duty to build and implement well-founded, realistic, transparent and feasible regulatory mechanisms and tariff system methodologies. It is necessary to take the various forms and contents of the prevailing political and economic influences into account, which are expressions of various national strategies or interests, i.e. they represent an important element of the actual environment in which the regulatory agency and the regulated electrical power entities function, and in which the electricity market is established.

4) The Round Table Discussion highlighted an essential correlation among the issues of the regulation of regulated activities, especially monopolistic network systems and public services, in the dynamics of the opening of electricity markets and the manner of their organization. The right to access the networks and auxiliary services of the system is the first in a series of issues that must be addressed. There is no doubt that the right to access must be defined in advance through appropriate network rules and technical conditions. In order for this right to be exercised in a nondiscriminatory, transparent and non-discriminatory environment, it is necessary to predetermine and publish the technical and economic prerequisites for electricity connections, charges for using the transmission and distribution networks, and the conditions and charges for the use of the

država i njihovih odgovarajućih energetskih sektora i gospodarskih subjekata, koji su u spomenute procese i problematiku ušli ranije. S druge strane, prednost zemalja, njihovih energetskih sustava i gospodarstava, dakako i njihovih regulatornih tijela, koji su procese otvaranja tržišta električne energije i uvođenja novih oblika regulacije započeli tek nedavno, da mogu koristiti odgovarajuća iskustva zemalja u kojima su tržišta električne energije uspostavljena i razvijena ranije, i kojima je regulacija ušla u više faze i razdoblja primjene, pri tom ne ponavljajući njihove zablude i kriva rješenja.

6) U pogledu regulacije energetskih djelatnosti prednost je država i ekonomija, uključujući i energetski sektor, koji imaju dobro praćenje i izvještavanje o adekvatnim makroekonomskim gospodarskim parametrima, kao što su interesne, odnosno kamatne stope na vlastiti kapital i zaduženja, stope inflacije, premije na tržišne rizike, prinose od rizičnih i nerizičnih ulaganja, pokazatelje u svezi s prinosom dionica, premije za tržišni rizik vlastitog kapitala itd. Jednoznačni prijenos i primjena navedenih parametara iz jednog nacionalnog u drugi nacionalni energetski gospodarski sustav ili regulatorni okvir vrlo je dvojbena i prati ga niz pitanja i dvojbi. Tim više što ne samo da nema jednoznačnih kriterija, nego su i vrlo različiti pristupi utvrđivanju osnovica, npr. vrijednosti imovine i regulatorne osnovice, na koje se navedeni parametri primjenjuju. U tom kontekstu i ciljani financijski pokazatelji, kao što je to npr. stopa povrata na imovinu ili pak garantirani vremenski rok povrata uloženi sredstava, u posljednje vrijeme sve češće postaju predmetom preispitivanja, nerijetko čak i važno političko pitanje na nacionalnoj razini. Naime, s navedenim pitanjima usko su povezani problemi novih investicija i ulaganja u elektroenergetske sustave, ali i pitanja profita iz energetskih djelatnosti. Svaki od navedenih ekonomskih veličina i parametara dakako ima svoj odraz u odgovarajućem utjecaju na ekonomičnost poslovanja energetskog subjekta i njegovu sposobnost da se dalje razvija.

U okviru diskusije konstatirano je da bi bilo dobro i pragmatično da prve razvojne faze ekonomske regulacije prate i relativno jednostavne regulacijske sheme tipa *cost plus* ili povrata sredstava, da bi nakon stjecanja određenih iskustava i znanja uslijedio razvoj puno složenijih shema koje uključuju kombinacije tehničkih i ekonomskih inicijativa koje kroz dugoročni period trebaju osigurati sigurno i stabilno financiranje rada i adekvatni razvoj reguliranih energetskih subjekta, naročito velikih mrežnih infrastrukturnih sustava za prijenos i distribuciju električne energije. Opći konačni cilj je dakako sigurna opskrba električnom energijom po realnoj, odnosno opravdanoj cijeni.

auxiliary system services in the event that these are covered by the corresponding regulatory framework.

5) The Round Table Discussion clearly demonstrated the superiority of the experience and solutions of the regulatory bodies, countries, energy sectors and economic entities which had addressed these processes and problems earlier. On the other hand, the countries, energy systems, economies and certainly regulatory agencies that have only begun the processes of opening the electricity markets and introducing new forms of regulations have the advantage of being able to utilize the experiences and avoid repeating the past errors and inadequate solutions of the countries in which the electricity markets have already been established and developed, and in which regulations have entered advanced phases and periods of application.

6) In the regulation of energy activities, the governments and economies, including the energy sectors, that have good tracking and reporting of macroeconomic parameters such as interest rates on equity and debt, inflation rates, market risk premiums, yields from high-risk and low-risk investments, indices in connection with stock market yields, equity-risk premiums etc. are at an advantage. The direct transfer and application of these parameters from one national power system or regulatory framework to another is not practicable because a number of issues and dilemmas are involved. This is even more the case because there are no uniform criteria. Instead, there are highly varied approaches for the determination of the bases, for example the asset-value base and regulatory base to which the given parameters are applied.

In this context, the target financial indices such as the rate of return on assets or the guaranteed period of return on investment have lately become subjected to increasing scrutiny and are frequently an important political issue at the national level. Closely related to these issues are the problems of new investments in power systems, as well as the question of profit from electricity activities. Each of these economic measurements and parameters certainly influence the cost-effectiveness of the operations of entities and their ability to continue to develop.

Within the framework of the discussion, it was concluded that it would be good and pragmatic for the first development phases of economic regulation to accompany relatively simple regulation schemes of the "cost plus" or "return on assets" type. After experience and knowledge are acquired, this should be followed by the development of more complex schemes that include a combination of technical and economic initiatives, which over the long run should assure the secure and stable financing of operations

7) Regulatorna tijela imaju važnu ulogu u procesu odobravanja i nadzora provedbe razvojnih planova reguliranih subjekata, tj. prijenosne i distribucijske mreže i sustava, odnosno nadzornu ulogu u pogledu kvalitete i sigurnosti usluga i funkcija koje obavljaju ti energetske subjekti, ali i opskrbe krajnjih kupaca i korisnika u cjelini. Pristupi i praksa u različitim zemljama razlikuju se.

Ima primjera duboke uključenosti i odgovornosti regulatornog tijela u svim fazama i elementima planiranja (odobravanje i nadzor provedbe planova), osiguranja sredstava kroz naknade i poticajne elemente tih naknada (kapitalni troškovi, povrati na kapital), te općeg procesa nadzora rada reguliranog energetske subjekta. S druge strane, uloge nekih regulatornih tijela u početku nisu podrazumijevala obilježja duboke uključenosti. Nadomjestak dubljem regulatornom nadzoru bili su opći pristupi po kojim su npr. planirane investicije iz razvojnih planova i planova izgradnje bile odobravane do određene razine i kao takve uključene u naknade za korištenje mreže. Ima primjera i manje involviranosti regulatornog tijela u početnim fazama uvođenja regulacije ili tijekom početnih regulatornih perioda. Međutim, odmakom procesa i sve većom involviranosti regulatornog tijela u više slučajeva dovelo je do smanjenja naknada za korištenje mreža.

8) Navedeni tijek gotovo u potpunosti poklapa se s tijekom uvođenja složenih regulatornih pristupa i metodologija ekonomske regulacije, odnosno metoda poticajne regulacije energetske djelatnosti. Iz svega prethodnog izveden je zaključak da se u početku trebaju što bolje i preciznije definirati odgovornosti regulatornog tijela i reguliranih subjekata. Nadalje, u novonastalim i tržišnim okolnostima trebaju se dobro obuhvatiti i obrazložiti svi važni parametri, utjecajne veličine i okolnosti tržišnog okruženja koje se uvodi. Posebno je važno krenuti s jednostavnijim regulatornim pristupima i metodama, i to u pravilu s kraćim regulatornim periodima. Svaka od mogućih nesigurnosti ili skrivenih mana u regulatornom pristupu, krivo procijenjenog utjecajnog parametra ili ciljanog ekonomskog indeksa, nepredviđene loše posljedice procesa restrukturiranja u dinamičnom tržišnom okruženju, ali na kraju i posljedice moguće krive odluke regulatornog tijela, vodi ili vrlo visokim ili nedopustivo niskim iznosima naknada za korištenje mreža. Visoki iznosi naknada za korištenje mreža znače ne samo visoke troškove za korisnike mreža, nego, pogotovo za one izvan dosadašnjih integriranih nacionalnih elektroenergetskih sustava, i značajnu prepreku za ulazak na tržište električne energije, a time i njegovom razvoju. Iskazani neopravdano visoki iznosi profita u monopolnim djelatnostima imaju i daljnje negativne političke i socijalne posljedice, čak,

and the adequate development of the regulated energy entities, especially the large network infrastructure systems for the transmission and distribution of electricity. The general goal is, of course, a secure supply of electricity at a realistic, i.e. justified, cost.

7) The regulatory agencies have an important role in the process of the authorization and supervision of the implementation of the plans for the development of the regulated entities, i.e. the transmission and distribution networks and systems, and a supervisory role over the quality and security of the services and functions performed by these energy entities, as well as supply to the end users and users in general. The approaches and practices in various countries differ.

There are regulatory agencies that are deeply involved in and responsible for all the phases and elements of planning (the authorization and supervision of plan implementation), obtaining funds through charges and the incentive elements of these charges (capital expenditures, return on equity) and the general supervisory process of the operations of a regulated entity. On the other hand, initially the roles of some of the regulatory agencies were not characterized by deep involvement. Instead of in-depth regulatory supervision, there were general approaches according to which, for example, planned investments from development and construction plans were approved up to a specified level and as such included in the charges for network use. There are examples of less involvement by a regulatory agency during the initial phases of the introduction of regulation or during the initial regulatory periods. However, as the processes progressed and the regulatory agencies became increasingly involved in an increasing number of cases, in many cases the charges for network use dropped.

8) This nearly completely corresponds with the introduction of more complex regulatory approaches and methodologies of economic regulation, i.e. methods of the incentive regulation of activities. From the aforementioned, it was concluded that at the beginning it is necessary to define the responsibilities of the regulatory agency and the regulated entities as precisely as possible. Furthermore, under the newly arisen market circumstances, it is necessary to include and explain all the important parameters, influential values and market environment circumstances that are being introduced. It is especially important to start with simple regulatory approaches and methods and, as a rule, with short regulatory periods. Any of the potential uncertainties or hidden flaws in a regulatory approach, an incorrectly estimated influential parameter or a target economic index, the unforeseen negative consequences of the restructuring process in a dynamic market environment, or the ultimate consequences of any wrong decisions by the regulatory agency may lead either

ili naročito u slučajevima kada su državna tijela te profite oduzela energetske subjektima. S druge strane, niski ili nedovoljno visoki iznosi naknada za korištenje mreža direktno ugrožavaju poslovanje energetskih subjekata, kvalitetu usluga i funkcija koje ti subjekti pružaju, a ako takvo stanje traje duže, onda i tehničko-tehnološke osobine same mreže i sustava.

Konačan zaključak u pogledu prethodnog bio je da bez obzira na uzroke, svaki problem i svaka posljedica prenosi se na korisnika ili krajnjeg kupca i postaju njegov problem, a obveza je i energetskog subjekta i regulatornog tijela da u reguliranom okruženju te probleme i posljedice otklone. Najefikasnijim općim pristupom otklanjanja svih negativnih posljedica ocjenjuje se pragmatični pristup i postupanje, a ako je moguće i suradnja sve tri zainteresirane strane.

9) Poseban problem i izazov predstavlja regulacija mrežnih infrastrukturnih monopola, prijenosa i distribucije, te u svezi s tim usko povezani problem gdje i pod kojim uvjetima se osiguravaju pomoćne usluge sustava. Naročito se u segmentu pomoćnih usluga sustava mogu pojaviti dominantne pozicije i zlouporabe u još uvijek značajno integriranim sustavima, kada se poduzećima iz sustava ili grupe osiguravaju povoljniji uvjeti pristupa i korištenja pomoćnih usluga ili njihova plaćanja. U sprječavanju takvih situacija, štoviše njihova sankcioniranja, presudna je uloga regulatornih tijela.

Problem pomoćnih usluga i odgovornosti za njihovo osiguranje i pružanje usko je vezan s postojećim zakonodavnim i regulatornim okvirom, ili općenito pitanjem da li se na taj segment primjenjuje regulirani ili tržišni kontekst. U svakom slučaju, u svezi s tim segmentom najviše je pitanja i dilema. Pitanje je i kojoj djelatnosti iz dosadašnje integrirane strukture i jedinstvene tarife koja je uključivala sve djelatnosti i usluge pridijeliti odgovornost za osiguranje pomoćnih usluga, i kako te usluge naplatiti, kao dio odgovarajućih naknada ili zasebno. Neke zemlje taj problem razriješile su pridjeljujući obveze i funkcije osiguranja pomoćnih usluga operatorima prijenosnih i distribucijskih sustava, odnosno uvodeći ugovorne odnose po kojima tržišni sudionici i te usluge slobodno ugovaraju, osiguravaju i na kraju plaćaju. No, istaknuto je, da su takva rješenja i mehanizmi bili moguće tek nakon što je uspostavljena cjelovita funkcionalna i provedbena shema osiguravanja, tj. izvora i pridjeljivanja svake pojedinačne pomoćne usluge ili njene komponente, ali i uvjeta njihova eventualnog prekida i posljedica toga prekida. Činjenica je da su u nekim zemljama, a radi se o zemljama i energetskim gospodarstvima koja su u pravilu u ranim fazama procesa restrukturiranja, otvaranja

to very high or inadmissibly low charges for network use. High charges for network use would not only mean high costs for network users but would also pose a significant barrier to entry into the electricity market and development by those entities outside the current integrated national power systems. The unreasonably high profits of monopolies have further negative political and social consequences, even or especially in cases when government agencies have redirected these earnings away from the entities. On the other hand, low or insufficient charges for network use directly jeopardize the operations of entities, the quality of the services and functions provided by these entities and, if such conditions persist for extended periods, they may also jeopardize the technical and technological characteristics of the network and system.

The final conclusion in respect to the above is that regardless of the cause, each problem and consequence is shifted to the user or the final customers and becomes their problem. Both the entity and the regulatory agency should resolve these issues within the regulated environment and eliminate the consequences. The most efficient general approach to eliminating all such negative consequences is thought to be a pragmatic one, together with cooperation among all three interested parties, if possible.

9) A separate problem and challenge is the regulation of the network infrastructure monopolies, transmission and distribution and, closely connected to this, the issue of where and under which circumstances auxiliary system services should be provided. Especially in the segment of auxiliary services of the system, dominant positions and abuses may occur in systems that are still significantly integrated when enterprises from the system or groups are provided with more favorable conditions for accessing, using or paying for auxiliary services. In order to prevent such situations, moreover to penalize them, the role of the regulatory agencies is crucial.

The issue of auxiliary services and the responsibility for providing them are closely connected to the existing legislative and regulatory frameworks or, in general, to the question whether the regulated or market context should be applied to this segment. In any case, the most questions and dilemmas are associated with this segment. It is a question as to which activities from the current integrated structure and single tariff that included all the activities and services should be assigned responsibility for securing auxiliary services, and how should these services be charged, as a part of the corresponding charges or separately. Some countries have resolved this problem by assigning the obligations and functions for securing auxiliary services to the transmission and distribution system operators, or by introduc-

tržišta, odnosno razvoja i uspostave odgovarajućeg regulatornog okruženja, pitanja i problemi uspostave cjelovitog sustava osiguravanja, korištenja, pridjeljivanja i plaćanja pomoćnih usluga sustava još uvijek samo naznačeni ili tek u ranim fazama rješavanja. U svakom slučaju neriješena pitanja i problemi u svezi s pomoćnim uslugama sustava znatno otežavaju razvidnost i efikasnost procesa otvaranja tržišta električne energije u svim njegovim ključnim sastavnicama, a naročito u pogledu osiguranja uvjeta za razvidan, nepristran i pravedan pristup mrežama i sustavima. Takvo stanje ima daljnje negativne posljedice po razvoj i uvođenje novih metoda regulacije i metodologija tarifnih sustava, što posljedično i regulatorno tijelo dovodi u puno teži položaj i ugrožava njegovu vjerodostojnost suočavajući ga s objektivno teškim problemom izbora pristupa i metodologije, ali i reakcijom energetske subjekata i tržišnih sudionika.

U pravilu, stav je da u reguliranom kontekstu osiguranje i pružanje tih usluga treba biti jedna od funkcija i obveza operatora prijenosnog i distribucijskog sustava, koja je po unaprijed poznatim uvjetima, na razvidan, nepristran i nediskriminirajući način dostupna i pridjeljuje se korisnicima elektroenergetskih mreža i sustava. Zaključak je da razina cijena, odnosno tarifa za pomoćne usluge sustava treba biti troškovno utemeljena i razvidna u svim njegovim elementima. Tijekom rasprave istaknuto je da postoji i problem osiguranja određenih pomoćnih usluga od strane starih proizvodnih postrojenja. Kod postavljanja tržišnog modela o tom se mora voditi računa, naročito kod tržišnih modela koji podrazumijevaju mogućnost pristupa pojedinačnih proizvodnih postrojenja tržištu i njihove participacije na tržištu kao samostalnih tržišnih sudionika. Regulatorna tijela i operatori sustava o tim pitanjima i problemima moraju voditi računa u svim segmentima procesa definiranja tržišnog modela, regulatornog okvira i modela, provedbenih procedura, a ako je kontekst pomoćnih usluga sustava regulirani, onda i metodologiji utvrđivanja tarifnih stavki i proceduri ugovaranja i osiguravanja pomoćnih usluga sustava.

10) Ključnim ciljevima regulacije energetske djelatnosti, naročito prijenosa i distribucije električne energije smatraju se uspostava nepristranog i razvidnog pristupa mreži, pokrivanje opravdanih troškova poslovanja, nastojanja da se unaprijedi efikasnost sektora i/ili da se sektor učini privlačnim za nove investicije, odnosno ulaganja. Odgovarajući izvori financiranja mogu se osigurati bilo neposredno kroz naknade za priključak i korištenje mreža, bilo kroz odgovarajuće poticajne uvjete i povrate na investicije, odnosno od i imovinu energetske subjekta. Postupke i

ing contractual relations on the basis of which the market participants freely contract, provide and at the end pay for these services. However, it has been pointed out that such solutions and mechanisms are only possible after the entire functional and implementation scheme is established, i.e. the source and assignment of each individual auxiliary service or component thereof, as well as the conditions for their eventual termination and the consequences of such termination. The fact is that in some countries, mainly countries and electrical energy economies which are in the early phases of restructuring, market opening and developing an appropriate regulatory environment, the issues and problems of the establishment of the overall system for the provision, use, allocation and payment of auxiliary services are still only on paper or in the early phases of solution. In any case, the unresolved issues and problems in connection with auxiliary system services significantly diminish the transparency and efficiency of the opening of electricity markets in all the key elements, especially regarding the providing of the conditions for the transparent, nondiscriminatory and fair access to networks and systems. Such a situation has further negative consequences upon the development and introduction of new regulatory methods and methodologies of the tariff systems, which consequently place the regulatory agency in a far more difficult position and threaten its credibility, confronting it with the difficult problem of choosing an approach and methodology, as well as the reactions of the entities and market participants.

In principle, the position is that in the regulated context, providing these services should be one of the functions and obligations of the transmission and distribution system operators, which, under predetermined conditions should be available and assigned to users of electricity networks and systems in a transparent, nondiscriminatory and non-discriminatory manner. The conclusion is that the level of prices, i.e. tariffs for the auxiliary services of a system, should be cost-based and transparent in all elements. During the discussion, it was emphasized that there is also the problem of securing certain auxiliary services from the old power-generation facilities. When setting up a market model, this must be taken into account, especially with market models that include the option of access by individual power-generation facilities to the market, and their status as independent market participants. The regulatory agencies and system operators must take these issues and questions into account in all the segments of the process of the definition of a market model, regulatory framework and model, and implementation procedures. If the context of auxiliary system services is regulated, this also means taking into account the methodology for establishing tariff items and procedures for the contracting and providing of auxiliary system services.

metode regulacije i metodologije tarifnih sustava u tom pogledu nužno je stalno dograđivati i unaprjeđivati. U tom pogledu, regulatorno tijelo ima primarni zadatak, ali s obzirom na to da opskrba električnom energijom ostaje i nadalje aktivnost visokog socijalnog i gospodarskog značenja, u rad na predmetnoj problematici trebaju biti uključena poduzeća iz energetskega sektora, tijela državne uprave i druge državne institucije, stručna i ostala javnost, te organizacije za zaštitu interesa potrošača, sindikati i financijske institucije. Sve više je dokaza u prilog opće važnosti koje predmetnoj problematici posvećuju sve navedene stranke.

11) Regulatorno tijelo treba imati kontrolu nad svim segmentima regulacijskog razdoblja. Naročito se to odnosi na pripremno razdoblje u kojem bi regulatorno tijelo trebalo biti aktivno uključeno, uz regulirani subjekt. Odnosi se to na pregled ulaznih podataka, podloga i parametara koje se koriste, njihovu obradu, kao i rokove u kojima se pojedini segment pripreme faze za uvođenje metode regulacije mora provesti. U prilog tome govore i odgovarajuća iskustva nekih zemalja.

12) U prethodnom kontekstu, u socijalnom, političkom i gospodarskom smislu u svezi sa stabilnošću i sigurnošću opskrbe svakako je dobro izbjegavati velike i nagle skokove u promjenama cijena, nepredvidive ili nenajavljene promjene cijena. U pogledu mogućnosti reguliranih energetskega subjekata da razumiju, prilagode se i provedu odgovarajući regulatorni pristup i prilagode poslovanje novom sadržaju koji su iskazani kroz postupke i metode regulacije, svakako je nužna suradnja regulatornog tijela i reguliranih subjekata. Suradnja je i ključni preduvjet potpunog razumijevanja procesa i sadržaja definicije i uspostave određenog okvira i postupka regulacije, i kroz proces utvrđivanja i donošenja odgovarajućih tarifnih stavki, a time i njihova prihvaćanja i dobre provedbe. Uzimajući u obzir i sve druge moguće utjecaje, npr. socijalni i/ili politički, nije naodmet ustvrditi da se nerijetko postupa pragmatično, nastojeći odvagnuti i nastojeći valorizirati doprinos svakog od tih mogućih utjecaja ili ograničavajućih elemenata.

Od regulatornih tijela traži se kvalitetan i efikasan sustav nadzora nad tržištem električne energije, pogotovo sprječavanje ili čak sankcioniranje situacija u kojima se u tzv. integriranim sustavima sredstva prelijevaju iz monopolnih djelatnosti u tržišne djelatnosti, osiguravajući tržišnim djelatnostima znatnu neopravdanu i neprihvatljivu prednost u odnosu na druge tržišne sudionike u tržišnoj utakmici, što je ujedno i direktan oblik zlouporaba neopravdane tržišne pozicije ili snage. Navedeni su i konkretni slučajevi u kojima su u takvim si-

10) The key goals of the regulation of energy activities, especially the transmission and distribution of electricity, are to establish nondiscriminatory and transparent access to the network, cover justified operational costs, attempt to improve the efficiency of the sector and/or make the sector attractive for new investments. Suitable sources of financing can be secured either directly through charges for connection to the network, network use or through suitable incentive conditions and returns on investments, i.e. from the assets of the entities. Procedures and methods for the regulation and methodology of the tariff systems must be constantly updated and improved. In this regard, the regulatory agency has the primary task. However, since the supplying of electricity continues to remain an activity of great social and economic significance, enterprises from the energy sector, government administrative agencies, other government institutions, professionals, the general public, organizations for protecting consumer interests, unions and financial institutions should be included in working on this issue. There is increasing evidence of the general importance afforded to this issue by all the aforementioned parties.

11) The regulatory agency must have control over all the segments of the regulatory period. This especially refers to the preparatory period in which the regulatory agency should be actively involved, together with the regulated entity. It concerns a review and processing of the input data, bases and parameters used as well as the periods within which the separate segments of the preparatory phase for the implementation of a regulatory method must be completed. The corresponding experiences of some countries underscore this point.

12) In the aforementioned context, in the social, political and economic sense, regarding the stability and safety of supply, it is indeed good to avoid large and sudden price changes and unforeseen or unannounced price changes. Regarding the abilities of the regulated energy entities to understand, adapt to and implement the suitable regulatory approach and adjust operations to the new content expressed through the regulatory procedures and methods, cooperation between the regulatory agency and the regulated entities is certainly essential. Cooperation is also a key prerequisite for completely understanding the process and the contents of the definitions and the establishment of certain frameworks and regulatory procedures, both through the process of the determination and adoption of certain tariff items, and through their acceptance and correct implementation. Taking into account any other possible influences, e.g. social and/or political, it is worth mentioning that a pragmatic approach, in which it is attempted to weigh and evaluate the contribution of each of these potential influences or limiting elements, is often employed.

tuacijama regulatorna tijela postupala tako da se umanjila, ili čak oduzela odgovarajući dio prihoda od integriranog poduzeća, i to od segmenta tržišnih djelatnosti, i vratila ga u segment monopolnih, odnosno djelatnosti s obvezama javnih usluga iz kojeg su i bili neopravdano uzeti. U svakom slučaju, dok postoje dvije paralelne komponente tržišta, regulirana i liberalizirana, odnosno tržišna, regulatorno tijelo ima striktnu obvezu provjeravati razvidnost odvajanja pripadajućih računa i prihoda, a nerijetko i pravo da određene oblike ponašanja i prekršaja i jače sankcionira. Čest je slučaj da regulatorno tijelo ima pravo, utemeljeno na zakonu, samo provesti odgovarajući revizorski nadzor, ili taj nadzor zatražiti od nezavisnih revizora.

13) Okrugli stol je raspravio i pitanja strukture naknada za korištenje prijenosne, odnosno distribucijske mreže. Istaknuta je važnost primjene principa da struktura i razina naknada za korištenje mreža odražavaju strukturu troškova za elemente energije i snage, tj. kapaciteta, prema i za koje se utvrđuju. Poglavitito je element snage i njegovo vrednovanje važan u strukturi tarifnih stavki, tj. naknada za priključak, za korištenje prijenosne i distribucijske mreže, i naknada za pomoćne usluge sustava. Važnost elementa kapaciteta ogleda se i u vrednovanju u svezi s mehanizmima pridjeljivanjem, korištenjem i plaćanjem odgovarajućih prekograničnih kapaciteta, ili utvrđivanjem odgovornosti, odnosno postupcima rješavanja zagušenja u prijenosnoj i distribucijskoj mreži.

14) U nekim zemljama proces uvođenja novog regulatornog pristupa i primjene novih metodologija ekonomske regulacije koji u pravilu uključuju parametre valorizacije i poticanja učinkovitosti poslovanja reguliranog energetskog subjekta, a nerijetko i odgovarajuće opće makroekonomske indekse za valorizaciju i pokriće adekvatnih rizika poslovanja i ulaganja, rezultirao je u smanjenju naknada za korištenje mreža. Međutim, nije realno očekivati da bi se takav kontekst ponovio u većini drugih zemalja, pogotovo ne u zemljama u kojima su cijene električne energije bile pod jakom socijalnom i političkom kontrolom i u pravilu vrlo niske. Štoviše, u tim zemljama izražena je potreba za novim velikim ulaganjima u održavanje, rekonstrukciju i izgradnju mreža. Razdvajanje i izdvajanje energetskih djelatnosti iz dosadašnjih vertikalno integriranih elektroenergetskih struktura proizvodnje, prijenosa, distribucije i opskrbe električnom energijom, otvaranje tržišta električne energije i pojava novih sudionika na tržištu električne energije, tu potrebu samo su još više naglasili. Nije rijedak slučaj sve češće iskazanih uvjerenja da bez dobrih i efikasnih infrastrukturnih prijenosnih i distribucijskih mreža i sustava ne može biti govora o razvoju efikasnog tržišta električne energije.

The regulatory agencies are required to provide a quality and efficient system of supervising the electricity market, especially to prevent or penalize situations in which funds flow from monopoly activities into market activities in the so-called integrated systems, which affords businesses with market operations a significant unfair and unacceptable advantage over other market participants in market competition, and is a direct form of the abuse of an inequitable market position or power. Specific cases were mentioned in such situations when the regulatory agencies acted to reduce or even confiscate the corresponding portion of the revenues from an integrated company from the segment of market activities and direct them back to the monopoly segment, i.e. the activities having the public service obligation from which they had been unfairly taken. In any case, as long as there are two parallel components of the market, regulated and liberalized, the regulatory agency has the strict obligation to verify the transparency of the separation of the corresponding invoices and revenues, and not infrequently the right to penalize certain forms of behavior and violations severely. The regulatory agency frequently only has the right, pursuant to the law, to conduct a suitable audit or request to have such an audit performed by independent auditors.

13) The Round Table Discussion also included questions regarding the structure of charges for the use of a transmission or distribution network. The importance was stressed of applying the principle that the structure and level of charges for network use should reflect the structure of the costs of the elements of energy and power, i.e. the capacities according to and for which they are determined. The element of power and its valuation are particularly important for the structure of the tariff items, i.e. charges for connection, the use of the transmission and distribution networks and auxiliary system services. The importance of the capacity elements is reflected in the evaluation in connection with mechanisms for capacity allocation, the use and charges for cross-border capacities, or determination of the responsibilities, i.e. the procedures for managing congestion in the transmission and distribution networks.

14) In some countries, the process of introducing a new regulatory approach and the application of new methodologies of economic regulation, which as a rule include the parameters for the evaluation and increased effectiveness of the operations of a regulated power entity and not infrequently the corresponding general macroeconomic indices for the evaluation and coverage of adequate risk operations and investments, have resulted in lowered charges for network use. However, it is not realistic to expect such a context to be repeated in the majority of other countries, especially those where electricity prices

Na spomenuti kontekst ulaganja u održavanje, rekonstrukciju i izgradnju nacionalnih elektroenergetskih mreža, odnosno izgradnje novih visokonaponskih prijenosnih prekograničnih poveznica s drugim zemljama i sustavima sve važniji utjecaj ima regionalni i širi multinacionalni kontekst tržišta i razmjena električne energije. Opća je pojava da prekogranična trgovanja i razmjene energije vrlo brzo rastu, zbog čega su za tranzite i prekogranične razmjene energije uvedeni i primjenjuju se novi opće prihvaćeni kompenzacijski i alokacijski mehanizmi. Isti se već jednoznačno primjenjuju u kontekstu internog europskog tržišta električne energije. Nadalje, prihodi ostvareni prekograničnim razmjenama moraju se tretirati na razvidan i nepristran način. Međutim, unatoč nastojanju da se razvije i uspostavi efikasan, razvidan, nepristran i pravedan, u konačnici i lako provediv sustav i mehanizam, za neke elektroenergetske sustave i nadalje ostaje problem načina utvrđivanja i alokacije troškova za visoke gubitke električne energije. Isto vrijedi i u pogledu adekvatnog dijela pomoćnih usluga sustava. Naime, radi se o onom dijelu dodatnih gubitaka električne energije u nacionalnoj elektroenergetskoj mreži i dijelu dodatnih pomoćnih usluga sustava koji nastaju zbog prolaza ili kružnih tokova energije iz međunarodnih, tj. prekograničnih razmjena energije. Opći je stav da europsko energetske zakonodavstvo, tj. odgovarajuće direktive i uredbe EU u tom pogledu predstavljaju adekvatan zakonodavni okvir za postupanje svih regulatornih tijela.

15) Poseban je problem načina pristupa i dobivanja informacija i podataka koje s jedne strane regulatorno tijelo može tražiti i traži od reguliranih subjekata, a koje s druge strane ti regulirani subjekti mogu i žele dati ili daju regulatornom tijelu. U svakom slučaju razlike, tj. asimetrija informacija, u tom pogledu uvijek su prisutne. Zaključak je da je u svakom slučaju, bilo u pogledu zadovoljavajućeg rješenja, bilo barem dobre ravnoteže između regulatornog tijela i reguliranih energetske subjekata najbolje i najefikasnije odabrati pragmatična rješenja, po mogućnosti zasnovana na dostupnoj najboljoj i najefikasnijoj međunarodnoj praksi i benchmarku. Prethodno gotovo u potpunosti vrijedi i u pogledu procesa i prakse regulatornog ili revizorskog nadzora.

16) Posebno je uočena i istaknuta mogućnost i potreba šire, tj. regionalne elaboracije i rasprave problema sadržaja i forme regulacije, regulatornih pristupa i politike, strukture i sadržaja tarifnih metodologija i samih tarifa, utjecajnih parametara i pokazatelja, naročito ekonomskih i političkih, usporednih (*benchmark*) pristupa i analiza, te svako veće suradnje i transfera znanja i iskustava.

have been under rigorous social and political control and, as a rule, very low. Moreover, in these countries there is a marked need for major new investments in maintenance, reconstruction and network construction. The separation of energy activities from the heretofore vertically integrated structures of the generation, transmission, distribution and supply of electricity, the opening of the electricity markets and the appearance of new participants on the electricity market further underscore this need. Opinions are frequently voiced that the development of an efficient electricity market is not feasible without a good and efficient infrastructure for the transmission and distribution networks and systems.

In this context, investments in the maintenance, reconstruction and construction of national electrical energy networks or in the construction of new high voltage transmission cross-border connections with other countries and systems have an increasing impact upon the regional and broader multinational context of the markets and the exchange of electricity. The cross-border commerce and exchange of energy is generally growing very rapidly, due to which new commonly accepted compensation and allocation mechanisms have been introduced and applied for the transit and cross-border exchange of energy. Such mechanisms are already being applied uniformly within the context of the internal European electricity market. Furthermore, the revenues from cross-border exchanges must be treated in a transparent and nondiscriminatory manner. However, despite attempts to develop and establish an efficient, transparent, nondiscriminatory, just and, in the final analysis, easily applicable system and mechanism, some energy systems are still confronted with the problem of how to determine and allocate expenditures for high losses of electricity. This concerns the share of the additional electricity losses in the national electrical energy network and the share of the additional auxiliary system services that occur due to transit or circular flows from international, i.e. cross-border, energy exchanges. The general position is that the European energy legislation, i.e. the corresponding directives and regulations of the EU in this respect, represents an adequate legislative framework for the operations of all the regulatory agencies.

15) There is a specific problem regarding the manner of accessing and obtaining information and data which a regulatory agency can and does require from regulated entities, and which these regulated entities can and want to provide or do provide to the regulatory agency. In any case, these differences, i.e. information asymmetry, are always present in this regard. The conclusion is that in order to obtain a satisfactory solution or at least a good balance between the regulatory agency and the regulated en-

5 ZAKLJUČAK

Okrugli stol o ulozi regulatornog tijela u donošenju tarifnih sustava organiziran je kao mjesto susreta i rasprave eksperata i direktnih sudionika, odnosno zainteresiranih strana u regulacijskom procesu, od predstavnika regulatornih tijela, stručne i znanstvene javnosti, do predstavnika reguliranih subjekata. Okrugli stol bio je vrlo uspješan i u potpunosti je opravdao razloge organiziranja, ponudivši dobru elaboraciju problematike i sadržaja regulacije energetskih djelatnosti, organizacije i nadzora tržišta električnom energijom, a posebno i ciljano uloge regulatornog tijela u donošenju tarifnih sustava. Konačno, Okrugli stol ponudio je i niz odgovora, ali i što je još važnije, sudionike je ili uveo u predmetnu problematiku i ukazao im na opću prisutnost sličnih pitanja i dilema u svim zemljama, od članica EU do zemalja koje će tek postati članice EU, ili im dao odgovore na pitanja i dileme s kojima su došli na Okrugli stol. Bez obzira na različita iskustva i dinamiku procesa, Okrugli stol je pomogao da se identificira i komentira niz izazova i problema s kojima se suočavaju sva regulatorna tijela, ali i sva regulirana poduzeća i energetski subjekti, bez obzira na sustave iz kojih dolaze i kontekst u kojem su nastala i u kojem su se razvijala. Također, uočena je mogućnost i potreba za stalnom elaboracijom i raspravom problema sadržaja i forme regulacije, regulatornih pristupa i politike, strukture i sadržaja tarifnih metodologija i samih tarifa, utjecajnih parametara i pokazatelja, naročito ekonomskih i političkih, usporednih (*benchmark*) pristupa i analiza, te svakako veće suradnje i transfera znanja i iskustava.

Zbog svega prethodnog, cilj i svrha ovog članak bili su širu stručnu i znanstvenu javnost izvijestiti o rezultatima, odnosno tijeku i zaključcima tog Okruglog stola, te eventualno potaći stručnu i znanstvenu raspravu o izloženoj problematici, pa čak potaći organizaciju novih okruglih stolova i rasprava o izloženim pitanjima, problemima, sadržajima, ali i izazovima regulacije energetskih djelatnosti.

ergy entities, it is best and most efficient to choose pragmatic solutions, if possible based upon the best available and most efficient international practices and benchmarks. The aforementioned applies in its entirety to the processes and practices of regulatory or audit supervision.

16) We have especially noted and emphasized the possibility and necessity for the broader regional elaboration and discussion of the problems of the contents and forms of regulations, regulatory approaches and policies, the structures and contents of tariff methodologies and the tariffs themselves, influential parameters and indices (especially economic and political), benchmark approaches and analysis, together with greater cooperation and the transfer of knowledge and experiences.

5 CONCLUSION

The Round Table Discussion on the role of the regulatory agency in the adoption of tariff systems was organized as place of meeting and discussion among experts and direct participants, i.e. interested parties in the regulatory process, from representatives of the regulatory agencies, the professional and scientific public, to representatives of the regulated entities. The Round Table was highly successful and completely justified the reasons for its organization, providing good elaboration of the issues and contents of the regulations on energy operations, the organization and supervision of the electricity market and, particularly, the planned role for the regulatory agency in the adoption of the tariff systems. Finally, the Round Table Discussion provided a series of answers but, more importantly, introduced the participants to the issue under discussion and demonstrated to them that similar questions and dilemmas are generally present in all countries, from the member countries of the EU to the countries that will become members of the EU, or provided them with answers to the questions and dilemmas that they brought with them to the Round Table. Regardless of the various experiences and process dynamics, the Round Table Discussion helped identify and comment on a series of challenges and problems confronted by all regulatory agencies, as well as all regulated enterprises and energy entities, regardless of the systems from which they come and the context in which they originated and developed. Furthermore, the possibility and need were perceived for the ongoing elaboration and discussion of the problems of the content and form of regulation, regulatory approaches and policies, the structure and content of tariff methodologies and the tariffs themselves, the influential parameters and indices (especially economic and political), benchmark approaches and analysis, and certainly

greater cooperation and the transfer of knowledge and experience.

Due to all the aforementioned, the goal and purpose of this article were to inform the general professional and scientific public about the results and conclusions of this Round Table Discussion, eventually stimulate expert and scientific discussion about the issues presented, and even stimulate the organization of new round tables and discussions on the questions, problems, contents but also the challenges of the regulation of energy operations.

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Uredništvo primilo rukopis:
2007-07-30

Manuscript received on:
2007-07-30

Prihvaćeno:
2007-08-13

Accepted on:
2007-08-13