29 March 2007

# Screening report

# Croatia

## Chapter 15 – Energy

**Date of screening meetings:**

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## I. CHAPTER CONTENT

The objectives of EU energy policy are competitiveness, security of supply and sustainability. The energy *acquis* consists of rules and policies notably regarding competition and state aids including in the coal sector, conditions for equal access to resources for prospection, exploration and production in the hydrocarbon sector, the internal energy market (opening up of the electricity and gas markets), the promotion of renewable energy sources and energy efficiency, nuclear energy and nuclear safety and radiation protection. As regards international agreements, the chapter contains the Energy Charter Treaty and related instruments.

As regards **security of supply**, the *acquis* requires Member States to hold oil stocks of specified categories of fuel equivalent to 90 days of average annual consumption, and to report regularly to the Commission on hydrocarbon production, imports and prices. A body for the management of crisis situations needs to be set up.

The completion of the **internal energy market** is based on the Community rules on competition and state aids. Member States must ensure gradual liberalisation of the markets for electricity and gas adhering to the principles of transparency, non-discrimination, third-party access, cross-border transmission, security of supply and sustainability. Accounts for transmission and distribution activities are to be unbundled. Universal electricity services must be guaranteed and vulnerable customers be granted adequate protection. An independent regulatory authority must be designated as responsible for the efficient functioning of the markets. An independent transmission system operator (TSO) is equally crucial for the functioning of the internal electricity and gas markets.

**State aids** to the coal industry can only be granted under specific conditions.

The promotion of **renewable energy** and **energy efficiency** includes requirements to transpose *acquis* on biofuels, electricity from renewable energy sources, high efficiency cogeneration based on useful heat demand, the improvement of energy efficiency of buildings, energy services and various other initiatives. Energy-using products must fulfil eco-design requirements and household appliances must carry energy labelling. An enforcement body is required in particular for labelling and minimum efficiency standards. To promote renewable energy and energy efficiency, Member States can participate in various actions under the Intelligent Energy Europe and other programmes.

As regards **nuclear energy**, the Euratom Supply Agency has exclusive rights to conclude contracts for the supply of nuclear materials, which must be notified (with exceptions). Undertakings also need to have relevant accountancy capacities. An independent nuclear safety authority should be established in line with EU best practices. Council resolutions of 1975 and 1992 support the development of a common nuclear safety culture. The European Council has repeatedly emphasised the importance of a high level of **nuclear safety** in candidate countries. Member States must ensure the protection of workers and the population from the risks arising from ionising radiation, by complying with the Community *acquis* on **radiation protection**, covering authorisation and reporting of practices and operational protection of workers and population in normal circumstances, strict controls on radioactive sources, supervision of shipments and of radioactive waste, environmental monitoring, control of contamination of foodstuffs and an appropriate framework for emergency preparedness.

## II. COUNTRY ALIGNMENT AND IMPLEMENTATION CAPACITY

This part summarises the information provided by Croatia and the discussion at the screening meeting.

Croatia indicates that it can accept the *acquis* regarding energy as of 1st July 2006. However, due to considerable investments deemed necessary by Croatia for complying with the *acquis* on oil stocks, energy performance of buildings, energy end-use efficiency and energy services, Croatia indicates that it expects some difficulties in implementing the *acquis* in these areas by the date it foresees for its accession.

### II.a. Security of supply

Croatia in October 2005 held oil stocks equivalent to 71.9 days of the previous year's average daily consumption. A new Act on the Oil and Petroleum Products Market entered into force on 1st June 2006 bringing up the country's obligation to hold oil stocks from 40 days to 90 days by 31st July 2012. This amount may be reduced by up to 25% given Croatia's domestic oil production, which is however declining (as is gas production). All importers of crude oil or petroleum products currently are obliged to hold at least 20% of their imports in the previous year. Under the same law an agency for the management of compulsory oil stocks is established. The agency will start functioning in the first half of 2007. The agency will by the end of 2012 hold all compulsory national stocks, whereas the stocks that are currently held by energy undertakings (large importers of oil and petroleum products) will be allowed to decrease *pro rata* as the stocks held by the agency will increase.

Croatia intends to adopt further implementing legislation in 2007 to achieve full compliance on oil stocks. Croatia states that it foresees no legal problems in the transposition of directives 68/414 and 98/93, but expects financial difficulties with the necessary investments in storage capacity.

A national legal framework is in place for measures to mitigate the effects of difficulties in the supply of crude oil and petroleum products, designating the Government and the Ministry of the Economy as responsible authorities for crisis management. Croatia intends to achieve full transposition of the relevant *acquis* with the adoption of an emergency plan in 2007.

Regarding the market for oil imports, Croatia's legal framework obliges importers to report on their imports to the Government (quantity, origin, price and sulphur content). As for production, applicants for exploration licenses must be registered in Croatia. Tender selection criteria for authorisations include applicants' "good repute". Croatia intends to adopt further legislation including a new mining act in 2008 to achieve full compliance with the *acquis* in this area.

Oil pricing does effectively not yet take place under fully free market conditions, and third-party access to transmission and storage facilities is not guaranteed.

Croatia stopped producing coal in 1999. It covers its entire needs of hard coal, lignite and coke by imports from third countries. Croatia states that it will have no difficulties to report to the Community on a semester basis on the imported coals' volumes, quality (content, calorific values) and average prices, and foresees to adopt in 2007 an ordinance on reporting of data on imports of crude oil and petroleum products.

## II.b. Internal energy market

Croatia's policy objectives are to establish an open **electricity market** in accordance with the principles of transparency, non-discrimination and openness, ensuring security of supply, quality of service, customer protection, environmental protection and sustainable development including compliance with the Kyoto protocol.

Croatia's legal framework for the electricity market covers generation, transmission, distribution, wholesale and retailing activities, import and export, rights and obligations of market actors, and the establishment of a regulator. The framework is based on the Energy Act, the Electricity Market Act and the Act on the Regulation of Energy Activities of 2001, revised in 2004, the Competition Act of 2003 and some further legislation covering most aspects of the relevant EU directives, such as the transmission system, balancing and settlement, grid issues, import and export, licensing, distribution, tariffs, eligible consumers, supplier of last resort, vulnerable customers, demand forecasts, accounting guidelines. A system for Guarantees of Origin for renewable energy sources and cogeneration remains to be established.

Croatia intends to fully comply with the electricity market *acquis* even before accession. Full market opening for non-household customers is planned for 1st July 2007 and for all consumers by 1st July 2008. With an eligibility threshold of 9 GWh, the legal market opening rate currently stands at 25%, but in reality there have been no new market entrants due to a lack of effective incentives. All prices remain regulated, except for prices for supplies to eligible customers.

The unbundling of the monopolistic, 100%-state owned incumbent company HEP leaves generation, transmission and distribution assets within the overall ownership structure of the HEP holding group. According to the Act on the Privatisation of HEP from the year 2002, the state will retain a 51% share in HEP. The timeframe for the privatisation of HEP remains to be established. The transmission system operator (HEP-Operator prijenosnog sustava OPS) established in April 2005, and the distribution system operator (HEP-Operator distributcijskog sustava ODS) which has been performing its function since January 2006, remain part of vertically-integrated HEP, albeit unbundled in terms of legal status, management and accounting. The holding company approves the annual financial plans of OPS and ODS, but does not interfere in their everyday operations. Under this asset-ownership model, subsidiary companies lease assets from the parent company under 30-year contracts. According to Croatian legislation, the Croatian Energy Regulatory Agency (HERA) is competent for monitoring the actual independence of OPS and ODS.

The market operator (HROTE) founded in April 2005 has responsibility for the adoption of market rules, organising the market and settlement of balancing energy. HROTE enters into contracts with eligible producers of renewable energy sources (RES) and cogeneration (CHP), and collects and allocates the funds designated as incentives for RES and CHP. Ownership of HROTE is about to be transferred from the HEP Group to the state. New market rules are under preparation[1].

The markets for electricity, gas, petroleum and LPG are supervised by the Croatian Energy Regulatory Agency (HERA) which was set up in 2005 as an independent, autonomous public institution financed from a 0.06% levy on energy undertakings' revenues and from licensing and other fees. It has a staff of 34[2]. Further staffing is ongoing but recruitment proves

[1] New market rules entered into force on 1 January 2007.
[2] Increased to 37 as of January 2007.

difficult. Tariff methodologies are prepared by HERA but the actual tariffs are decided by the Government[3]. HERA contracted some technical studies out to external experts. The ministry carries out the administrative control over implementation of legislation and regulations. In addition, a State Inspectorate carries out inspection control over implementation of legislation and regulations, technical regulations and security standards.

As regards access to the network for cross-border exchanges in electricity, Croatia is connected to all its neighbours save Montenegro, but the TSO has not yet adopted relevant rules on the allocation and use of cross-border transmission capacities[4]. The TSO currently charges a transit fee which will be lifted once the TSO becomes a member of the inter-TSO compensation mechanism, planned for 2007.

Electricity losses (technical and non-technical losses) in the distribution network amounted to 10.5% on average over the last four years. Transmission losses were reduced from 4.8% in 2004 to 3.5% in 2005 thanks to grid reconstruction and UCTE (Union for the Co-ordination of Transmission Energy) reconnection. Croatia aims at reducing these losses which will require substantial investments in the transmission and distribution network. Three-year plans for network development and construction for transmission and distribution must be submitted to HERA by the TSO and the DSO respectively.

Croatia's policy objectives for the **gas sector** are to establish a functioning open market in line with the EU internal market. As a member of the Energy Community for southeast Europe, Croatia also intends to develop a regional role, in particular as regards its LNG and gas storage capacities. Croatia has domestic gas production whose output is declining, and also imports gas from Russia.

Croatia's legal framework regulating the gas sector is based on the Energy Act, the Act on the Gas Market, the Act on the Regulation of Energy Activities, the Competition Act and various implementing regulations covering most aspects of the relevant EU directives, such as transmission and network operation, distribution, wholesale trading, eligible consumers, third-party access, export, storage, licensing, tariffs, consumer service obligations, security of supply and emergency measures. With a view to achieving full alignment, a further revision of the Gas Market Act is being prepared, and further implementing legislation is planned for 2007. In particular, the gas distribution sector, gas storage activities and LNG terminal activities are still to be regulated. Furthermore, there are no adequate provisions yet on third-party access rights, interruptible service obligations, and methodologies for capacity allocation and congestion management. Regarding the concession regime, the law currently provides for authorisation and tendering on an equal basis, with long-term contracts (15-30 and 20 years respectively).

There is no effective wholesale market yet, as the company INA holds a monopoly as the country's only producer, supplier and importer. INA was partly privatised in 2003 (25% plus 1 share) but for the time being the state retains a majority stake in it, which is to be reduced eventually to at least 25% plus one share. Its accounts for each of these activities are required by law to be unbundled. Croatia expects new pipeline projects to bring in additional suppliers. The transmission system is owned and operated by the state-owned company Plinacro. There are 38 mostly small-size distribution undertakings, most of which are part of utility companies that also offer various other services.

[3] Four new tariff methodologies without tariff rates entered into force in January 2007.
[4] Respective rules entered into force on 1 January 2007.

As described above for the electricity sector, the regulator HERA sets the gas tariff methodology but the actual tariffs are decided by the Government. Likewise, the Ministry is responsible for administrative control whereas the State Inspectorate is tasked with inspection controls on the implementation of legislation and regulations.

As regards international agreements relevant for energy trade, market access and cross-border transit, Croatia has ratified the Energy Charter Treaty (ECT) and related protocols and amendments, and is actively contributing to its functioning. Croatia accepts all trade-related investment measures of the ECT. Its legal framework does not make any distinction between domestic and foreign investors.

### II.c. State aids

As there is no coal mining in Croatia anymore, no applications for the granting of state aid for the mining sector have been made under the State Aid Act, nor are any expected for the future.

### II.d. Renewable energy

Croatia has established a basic legal framework for the promotion of renewable energy sources (RES) with the adoption of its revised energy market legislation, and the Act on the Environmental Protection and Energy Efficiency Fund. The Energy Act defines the use of renewable energy sources as a national interest of the Republic.

Specific legislation for the promotion of renewables is yet to be adopted however. Provisions concerning support mechanisms for renewable energy sources are under preparation. Croatia intends to introduce a feed-in tariff system for supporting the production of electricity from renewable energy sources and cogeneration.

Croatian electricity production from renewable energy sources is largely dominated by hydropower, with a minor contribution from wind power, solar energy and biomass. Croatia has not yet set itself a target to increase the share of electricity from renewable energy sources in total electricity consumption, but a draft regulation is expected to bring the share of electricity produced from incentivised renewable energy sources up from 0.8% in 2004 to approx. 5.8% in 2010. For the purpose of providing incentives, Croatia does not take into account RES electricity from large hydropower (capacity of 10 MW or more). However, Croatia states that if one includes large hydropower plants calculated on the basis of their ten-year average production (6092 GWh), Croatia's share of RES electricity in 2005 amounted to 34.7% and is foreseen to increase to 36.0% in 2010. Croatia states that due to the short time for implementing its incentive mechanism, it does not consider as realistic to define a more ambitious target than 5.8% for the share of electricity generated from incentivised RES by 2010.

A regulation on biofuel quality defines biofuels and sets a national indicative target of a 5.75% share of biofuels in the total annual consumption of petrol and diesel by the end of 2010. To achieve full alignment, Croatia intends to adopt an act on biofuels in 2008. Croatia intends to expand domestic biofuel production and provides continuous education and expert support to farmers.

The market operator receives relevant data but there is no legal basis yet for issuing Guarantee of Origin certificates. A temporary system for Guarantees of Origin is under development.

As regards administrative capacity, the Ministry of the Economy and the energy market regulator HERA are responsible for the promotion of renewable energy.

### II.e. Energy efficiency

Croatia is aware of the importance of energy efficiency as an integral part of demand management, and has begun to tackle most of the issues covered by the 2006 Directive on Energy End-Use Efficiency and Energy Services, full transposition of which is planned for 2008. Legislation covering most areas under the energy efficiency *acquis* has either been adopted or is under preparation. The Energy Efficiency Fund grants incentive loans for projects on the basis of public tenders. Croatia has not yet established a national savings target, an energy efficiency action plan or a regular system of energy audits of energy-intensive industry. Croatia states that difficulties in the implementation of the energy services directive could arise due to the financial costs implied.

Combined heat and power (CHP) generation by utilities and industry had reached a total installed capacity of 713 MW by 2004, corresponding to 15.6% of total installed capacity. Centralised district heating systems exist in Zagreb, Osijek and Sisak. Croatia's overall CHP potential is being investigated by an ongoing study.

Relevant basic provisions for high efficiency cogeneration are included in the Croatian energy market laws described above which define cogeneration as a national interest; the Electricity Market Act, the Act on the Production, Distribution and Supply of Thermal Energy; and a decision on connection fees. Specific implementing legislation is under preparation. The main support scheme foreseen for high efficiency cogeneration would be a feed-in tariff financed by a fee that would be part of the electricity price. Micro CHP plants receive favourable treatment regarding required primary energy savings, in line with directive 2004/8/EC. A temporary system for issuing Guarantee of Origin certificates is under development.

Heating-retention and energy economy aspects of buildings are regulated by the Building Act of 2004 and two technical regulations which only partially cover renewable energy sources, passive systems, orientation of buildings and energy performance certificates for new buildings, whereas cooling, lighting, regular inspections of boilers and air-conditioning systems, as well as requirements for qualification and training of inspection personnel are not covered. Croatia states that it intends to transpose articles 3, 4, 5 and 6 of the Energy Performance of Buildings Directive by 2008, while full transposition and implementation of articles 7, 8, 9 and 10 is planned for the end of 2011. The directive foresees an additional period of three years for Member States to apply fully the provisions on energy performance certificates (article 7) and inspections of boilers (8) and air-conditioning systems (9) and independent experts (10). Croatia is associated with the energy performance of buildings Concerted Action, an EU financed platform for Member States to exchange experience in the implementation of the energy performance of buildings directive.

As regards labelling, the Energy Act stipulates that all electricity appliances must carry energy efficiency labels. An ordinance of November 2005 has transposed all relevant EU directives. Awareness-raising efforts are underway. The only testing laboratory for testing energy efficiency of household appliances in Croatia is part of the private factory Končar – Kućanski Aparati. It is equipped to test electrical ovens only. The state disposes of no laboratories for testing energy efficiency of household appliances.

Transposition of the 2005 Framework Directive on Eco-Design and the directive on ballasts for fluorescent lighting is scheduled for 2008. The implementing directives on hot-water

boilers, and refrigerators and freezers have been transposed, including conformity assessments by accredited bodies and market surveillance by the State Inspectorate.

Croatia has signed a Memorandum of Understanding with the Community on its participation in the Intelligent Energy Europe programme (IEE) in March 2006. Preparations for a new MoU for the successor IEE II are ongoing in the Commission. Since 1997 Croatia has been conducting a dozen similar programmes. Croatia does not participate in the "Energy Star" programme, the voluntary labelling programme for office equipment run jointly by the EC and the US, but intends to transpose the successor agreement to this programme by 2008[5].

As regards administrative capacity, the main responsibilities for energy efficiency have been designated to the Ministry of Economy, others to the Ministry of the Environment and some other bodies. Croatia is considering the establishment of a central agency for energy efficiency issues, and has identified a potential for the setting up of local agencies and projects for energy efficiency promotion.

### II.f. Nuclear energy

There are currently no nuclear facilities or installations within the jurisdiction of the Republic of Croatia, but the Croatian utility HEP remains co-owner with a 50% share of the Krško nuclear power plant situated in Slovenia. There are no persons or undertakings in Croatia that fall under the scope of chapter VI of the Euratom Treaty, so no nuclear fuel transaction contracts exist. There are no special fissile materials or enriched uranium on the territory of Croatia except for small quantities of less than one tonne of depleted uranium, used for shielding devices in both medical and industrial applications. Low and medium level radioactive waste is stored temporally at two facilities in Zagreb that are attached to the Ruder Bošković Institute and the Institute for Medical Research, of which the latter is closed and does not hold a licence. Sources at the Institute for Medical Research that stem from past activities have been conditioned and secured and are prepared for transportation to a new central storage facility when established. A new radioactive waste storage facility is planned, but the Government has not yet taken a final decision on its location.

Croatia has joint responsibility with Slovenia for the decommissioning and waste management liabilities relating to the Krško NPP. According to a 2003 agreement between the two co-owners, a specific segregated fund needs to be set up in Croatia to cover its share of liabilities, to allocate all the required financial resources to this fund and to establish an adequate system of controls, so as to ensure that the resources set aside are only used for the purposes intended.

Croatia states that its administrative capacity is not sufficient for the implementation of all its obligations including the provisions of the Euratom Treaty, and needs to be strengthened. The State Office for Nuclear Safety (SONS) is the regulatory authority in charge of nuclear issues. SONS is dealing with nuclear activities and facilities, control of nuclear materials, licensing, inspections, emergency preparedness, illicit trafficking of nuclear materials, non-proliferation and international cooperation in these fields. Since it was established in June 2005, 12 of its 18 staff positions have been filled. SONS is financed from the state budget and reports directly to the Government which also appoints its director general and his or her assistants.

[5] The new Energy Star programme entered into force on 29 December 2006.

The regulator's responsibilities are set down in the Nuclear Safety Act of 2003, the Act on Liability for Nuclear Damage of 1998 and the Ordinance on Control of Nuclear Material and Special Equipment of 2005.

Regarding safeguards, Croatia has ratified the Treaty on the Non-Proliferation of Nuclear Weapons and has a safeguards agreement with the IAEA including an additional protocol which is in force.

Croatia is a member of the international Convention on Nuclear Safety, the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management and several other international agreements. It has bilateral agreements with Hungary and Slovenia on the early exchange of information in case of an emergency, and is negotiating another one with Italy.

### II.g. Nuclear safety and radiation protection

A detailed legal framework covering most of the nuclear safety and radiation protection issues under the *acquis* is in place in Croatia, consisting mainly of the Act on Ionising Radiation Protection and Security of the Ionising Radiation Sources of 2006, the Act on Sanitary Inspections of 1999 and numerous ordinances. There are no specific provisions yet on the control of shipments of radioactive waste. Only some border crossings are equipped with a limited number of radioactivity measuring devices. Samples of foodstuffs consignments are taken and sent to authorised laboratories for testing. In order to achieve full alignment, Croatia is preparing amendments and further implementing legislation scheduled for adoption in 2007.

For historical reasons, regulatory functions are shared by two bodies: The State Office for Radiation Protection (SORP) and the Ministry of Health and Social Welfare. The regulator is responsible for the safe use of ionizing radiation sources, radiation protection, management of radioactive waste, import, export, transport and storage of radioactive material, radiological emergency preparedness and regular training. Croatia states that the authority is understaffed, with only eight of its envisaged 14 having been filled in the State Office at the time of writing, and only two inspectors in the Ministry. The State Office is financed from the state budget and reports directly to the Government which also appoints its director.

Croatia recognises that there is no dedicated piece of legislation covering control of high activity radioactive sealed sources. The relevant *acquis* has however to a large extent been transposed into national legislation, except for some provisions such as the stipulation on prior authorisation for practices referring to the management of disused sources. An inventory of sources covering all registered medical and industrial sources exists. Safe return of disused sources will be regulated in a law currently under preparation. Liquid radioactive waste produced due to the use of open sources in nuclear medicine departments is released into a separate sewage system and stored in pools (decay tanks) in the hospitals until activity decreases below the exemption levels. Solid radioactive waste, including sealed spent sources, is transported to storage at the Ruder Bošković Institute.

A national plan dealing with emergency situations and assigning responsibilities for such situations is yet to be drawn up.

Croatia provides data from its national dose rate monitoring network to the European Radiological Date Exchange Platform (EURDEP) system on a regular basis.

The ECURIE agreement on Exchange of information in the event of radiological emergency with the Community has not yet been signed, but on the practical level Croatia participates in the EU radiological emergency preparedness activities.

## III. ASSESSMENT OF THE DEGREE OF ALIGNMENT AND IMPLEMENTING CAPACITY

Overall, Croatia has attained a satisfactory level of alignment in this chapter, and should be able to realize its ambitious legislative programme for further alignment. This will require sustained efforts in many sub-sectors of the energy chapter, in particular in the timely build-up of oil stocks, and in further alignment regarding energy efficiency, the energy performance of buildings and the promotion of renewable energy sources. The opening of the electricity and gas markets should be pursued in line with Croatia's planning. Administrative capacity needs to be strengthened in all sub-sectors to ensure effective implementation.

### III.a. Security of supply

Croatia needs to continue *acquis* alignment on hydrocarbons as planned. Its plan to build up oil stocks equivalent to 90 days' consumption by 2012 will need further attention.

Croatia needs to establish an emergency plan for hydrocarbons. Third-party access to transmission and storage facilities must be guaranteed. Pricing must effectively take place under free market conditions. Croatia also needs to bring its mining act into line with the *acquis* including as regards non-discriminatory tender selection criteria. The authorities should have the capacity to fulfil all reporting requirements to the Community by accession, but will need to prepare for this.

### III.b. Internal energy market

Croatia has achieved a good level of legal alignment as regards the internal market for **electricity**, except for cross-border exchanges. The necessary legal framework is largely in place. However, real and full liberalisation of the electricity market including effective third-party access as foreseen by 2008 still requires considerable efforts, and might prove difficult in practice under the envisaged market model. While Member States may choose different models to achieve the objectives of directive 2003/54, effective functional unbundling will need to be ensured. Croatia's chosen asset-ownership model with a separate market operator, although perhaps compatible with the *acquis*, is an unusual solution. Croatia needs to ensure that the framework for the allocation and use of cross-border transmission capacities is complete and in line with the requirements of the *acquis*.

Electricity losses are considerably above the EU average and Croatia should take measures to tackle this issue.

Croatia has achieved a good level of legal alignment as regards the internal market for **gas.** However, there is no effective wholesale market yet, and real and full liberalisation including effective third-party access still requires sustained efforts.

Croatia needs to adopt adequate provisions on a number of issues such as gas storage, LNG terminal activities, third-party access rights, interruptible service obligations, and methodologies for capacity allocation and congestion management. The concession regime needs to be aligned with the *acquis* which, while allowing for tendering if necessary, treats authorisation as the standard procedure.

Concerning administrative capacity, the young regulatory authority HERA needs to consolidate its capacities so that it will not need to rely on outside experts, which should include a training programme. Tariff decisions should be taken by the regulator, not the Government.

As concerns international agreements, Croatia is aligned with the Energy Charter Treaty.

### III.c. State aids

State aids legislation in force in Croatia would be applicable to the coal sector. Since there are no coal mining activities in the country anymore, the sector poses no problem in this regard.

### III.d. Renewable energy

Croatia should continue its transposition programme as regards renewable energy sources (RES) as scheduled, and generally develop its potential for RES. As concerns the promotion of biofuels, full alignment is foreseen to be achieved in 2007. To be in line with Directive 2001/77/EC, Croatia will have to set an ambitious target for the increase in the share of electricity from renewable energy sources in total electricity consumption, and to include all hydropower, irrespective of its size.

### III.e. Energy efficiency

Croatia has a consistent work plan for further alignment with the *acquis* on energy efficiency, which it should adhere to. Full implementation of the Energy End-Use Efficiency and Energy Services Directive will require further attention. Croatia should in particular set itself a 1% cum annual savings target and establish an energy efficiency action plan.

Concerning cogeneration (CHP) Croatia is not fully aligned yet, but demonstrates a clear understanding of EU requirements, and the indicated approach would seem satisfactory. Croatia should continue with the preparation of necessary implementing legislation including Guarantees of Origin. Furthermore, it should finalise the study of its national CHP potential, identify and eliminate administrative barriers to CHP, and promote high efficiency CHP.

Croatia is aligned with the directive on the energy performance of buildings to the extent that its current legislation partially covers renewable energy sources, passive systems, orientation of buildings and energy performance certificates for new buildings. While the directive foresees an additional period of three years for Member States to implement the provisions on energy performance certificates, inspections of boilers and air-conditioning systems, Croatia's timely implementation of the directive will need further attention.

Croatia is aligned with the EU directives on the labelling of energy products. Because its legislation has only entered into force very recently, awareness-raising measures should continue.

Already aligned with most of the older directives on minimum energy efficiency requirements, Croatia now needs to transpose the framework directive on eco-design and the directive on ballasts for fluorescent lighting.

Croatia will be invited to ratify the Memorandum of Understanding for its participation in the Intelligent Energy Europe II programme as soon as internal Commission preparations will be completed, and to join the new Energy Star programme after conclusion of negotiations on this.

As regards administrative capacity, Croatia should increase its laboratory capacities to verify the accuracy of labelling information.

### III.f. Nuclear energy

The administrative structures and legislative framework for the implementation of the *acquis* on nuclear energy are mostly in place in Croatia. No difficulties are expected for Croatia to fully comply with requirements regarding the Euratom Supply Agency upon accession. When signing the Euratom Treaty, Croatia will need to assign the relevant tasks to a designated body, and prepare the national contribution to the Euratom Supply Agency. The regulatory authority SONS is understaffed and needs to be strengthened.

The establishment and management of the specific decommissioning fund for the jointly owned nuclear power plant at Krško should be done in line with the Commission's recommendation on the management of financial resources for the decommissioning of nuclear installations, spent fuel and radioactive waste. In particular, a segregated fund with appropriate control on prudent use should be the preferred option for all nuclear installations. Financial resources should be used only for the purpose for which they have been established and managed, with due consideration given to transparency.

### III.g. Nuclear safety and radiation protection

As regards nuclear safety and radiation protection, detailed legislation is in place in Croatia concerning most aspects of the relevant *acquis,* which is however not fully in line. The country needs to further pursue alignment by preparing and adopting the outstanding implementing legislation under the new Act on Protection against Ionising Radiation and Safety of the Ionising Radiation Sources planned for 2007, fully transpose the directives on shipments of radioactive waste and radiological emergency preparedness, and enact the national emergency plan and the regulation on the disposal of radioactive waste. Croatia is furthermore encouraged to further equip its border crossings and entry points with radioactivity measuring devices.

The regulatory authority i.e. both the State Office for Radiation Protection and the Ministry of Health are understaffed and need to be strengthened. The distribution of competences should be clarified, in particular as concerns emergency preparedness (who does what in case of an emergency), illicit trafficking and inspections. Croatia is encouraged to consider efficiency gains that might be obtained through a simplified organisation of its administrative structures for nuclear energy, nuclear safety and radiation protection.

Regarding safeguards, Croatia will need to take the administrative steps necessary for compliance with the safeguards foreseen in Title II, Chapter VII of the Euratom Treaty and in Regulation 302/2005 with immediate effect upon accession. Croatia also needs to start to prepare the national procedures for accession to INFCIRC/193 and its Additional Protocol and the simultaneous suspension of the Safeguards agreements with the IAEA including the Small Quantities Protocol, to take place shortly after accession.