



Trajnostno poročilo skupine GEN  
Sustainability Report of the GEN Group





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## 1.1 Word from the Director

### *Energy industry and sustainable development: Why such a tight bond?*

*At the GEN Group we have decided to complement for the first time our Annual Report with a Sustainability Report since a large part of public and expert discussions about pursuing sustainable development revolve around or even focus on sustainability aspects of electricity generation. This, of course, is understandable and was to be expected for a number of reasons. The key reasons for this, as we see it, are the following:*

*Reason number one stems from the fact that the energy industry provides basic utilities to all citizens as consumers of electricity. It is an activity with products and projects so fundamental that we are all affected, in some form or another, by how well the energy industry performs, what political, expert and technical decisions regarding energy-related projects are made and how they are made, how much electricity is available and at what price, what impacts electricity production has on the standard of living, the environment, health, safety, to name a few.*

*Reason number two is that in the future it is going to be extremely difficult for the available energy-generating capacity to keep up with the growing demand for energy. Electricity, as it were, is in the front line because electricity consumption is likely to increase in the future despite – or even because of – efforts to boost energy efficiency, as intense as the efforts may be. Since importing electricity is neither economically viable nor does it ensure a steady supply, the best thing to do is build one's own production facilities that will – in the long run – constitute an energy mix that will enable us to secure energy self-sufficiency, environmental acceptability and economic competitiveness.*

*Thirdly, as a rule, the energy industry as an economic activity also and inevitably involves important projects with economic, social and environmental dimensions. These are the three strategic pillars of sustainable development, and we constantly seek to strike a balance between them, to keep them aligned.*

*With its measures, achievements, propositions and plans, the GEN Group wants to become and stay an important player in the debate over sustainable development and its promoter through developing and implementing responsible, knowledge-based, balanced and realistic solutions.*

*This Sustainability Report is not our first step towards promoting sustainable development of Slovenia, far from it. We have been playing this part actively for a number of years now. What this report does is paint the first comprehensive and systematic picture of the path towards sustainability we have walked so far. And it is also proof that we have a serious intention or ambition to further regulate, strengthen and expand this path in the future.*

## 1.1 Uvodnik direktorja

### *Energetika in trajnostni razvoj: od kod tako močna povezava?*

V skupini GEN smo se odločili, da k svojemu letnemu poročilu prvič priložimo tudi trajnostno poročilo, saj se velik del javnih in strokovnih razprav na temo uresničevanja trajnostnega razvoja nanaša tudi ali celo predvsem na trajnostne vidike proizvodnje električne energije. Kar je seveda iz več razlogov razumljivo in pričakovano. Ključni pa so po našem mnenju naslednji:

Prvi izhaja iz dejstva, da energetika zagotavlja osnovne dobrine za vse državljanke in državljanje kot porabnike električne energije. Gre torej za dejavnost, katere proizvodi in projekti so tako temeljni, da smo vsi na nek način odvisni od tega, ali in kako deluje energetika, kako in kakšne politične, strokovne in tehnične odločitve se sprejemajo v zvezi z energetskimi projektmi, koliko električne energije imamo na voljo in po kakšni ceni, kakšni so vplivi proizvodnje električne energije na življenjski standard, na okolje, zdravje, varnost ...

Drugi razlog je, da bodo na energetskem področju razpoložljive zmogljivosti tudi v bodoče zelo težko sledile rastočemu povpraševanju po energiji. Električna energija je pri tem še posebej izpostavljena, saj lahko v prihodnje kljub še tako intenzivnim ukrepom za povečanje učinkovitosti rabe energije – ali pa prav zaradi njih – pričakujemo rast porabe električne energije. Ker uvoz električne energije stroškovno ni smiseln in ne zagotavlja zanesljive oskrbe, je najprimernejša gradnja lastnih proizvodnih zmogljivosti, s katerimi bo dolgoročno zagotovljena takšna energetska mešanica, ki bo omogočala energetsko zadostnost, okoljsko sprejemljivost in ekonomsko konkurenčnost.

Tretji razlog izhaja iz dejstva, da energetika kot dejavnost praviloma pomeni tudi in predvsem pomembne projekte, ki se odražajo tako na ekonomskem, socialnem kot tudi okoljskem področju. Prav to pa so tudi trije strateški stebri trajnostnega razvoja, med katerimi nenehno iščemo uravnoteženost, skladnost.

Skupina GEN želi s svojimi ukrepi, dosežki, predlogi in načrti (p)ostati pomemben sestavni del razprave o trajnostnem razvoju ter njen spodbujevalec v smeri oblikovanja in uresničevanja odgovornih, na stroki temelječih, uravnoteženih in realističnih rešitev.

Trajnostno poročilo, ki je pred vami, je sicer vse prej kot naš prvi korak na poti uresničevanja trajnostnega razvoja Slovenije – to namreč počnemo že vrsto let. Je pa to poročilo prva celovita in sistematična predstavitev naše doslej prehajene trajnostne poti. In je izkaz resne namere ozioroma ambicije, da to pot v prihodnje še dodatno uredimo, utrdimo in razširimo.

Martin Novšak  
Director  
GEN energija



Martin Novšak  
direktor  
GEN energija



## 1.2 Word from the Editorial Team

### *Reasons for the (first) sustainability report of the GEN Group*

*At the GEN Group we are confident that our contribution to promoting sustainable development of Slovenia is substantial. Proof of this is our business results. Our aim for the future is to be engaged in this even more deeply, on a more elaborately planned basis and in dialogue with our key stakeholders.*

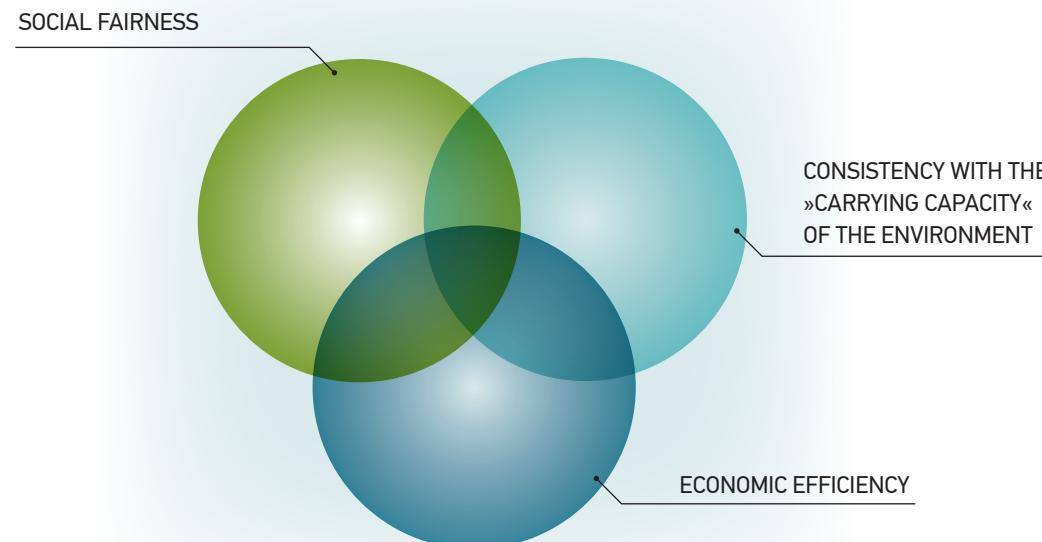
*This is exactly why we have drawn up this inaugural sustainability report for 2009. In the future we are going to make more decisive efforts to bring our employees as well as business and technical partners to the table for discussions which may contribute to responsible, factual and therefore realistic achievement of sustainable development and the energy future of Slovenia as laid down on its basis.*

*We know full well that this, our very first, sustainability report has room for revision and improvement in terms of substance and information. And we feel it is important to know where and how we will be able to bridge today's gaps further down the road and in this way contribute to a more responsible, better structured, clearer presentation of our measures, achievements, solutions and plans for a sustainable energy future.*

*We have done our best to make sure that the main topics and the performance indicators in this report equally represent all three pillars of sustainable development: environmental, economic and social. Most of all, we have been very careful to support every statement we make in this report with reliable figures and with as detailed descriptions of activities and measures as possible.*

*As we see it, this is the only way we can consistently, responsibly and comprehensively pursue our vision of achieving sustainability both internally, in the companies that make up the GEN Group, and externally, in relationships with all our stakeholders.*

The GEN Group  
Sustainability report  
editorial team<sup>1</sup>



*Strategic dimensions of sustainable development: environmental, social and economic*

## 1.2 Uvodnik uredništva

### *Zakaj (prvo) trajnostno poročilo skupine GEN?*

V skupini GEN smo prepričani, da pomembno prispevamo k uresničevanju trajnostnega razvoja Slovenije. To dokazujejo tudi naši rezultati. Še intenzivneje, bolj načrtovano in v dialogu z našimi ključnimi deležniki pa želimo to početi v prihodnje.

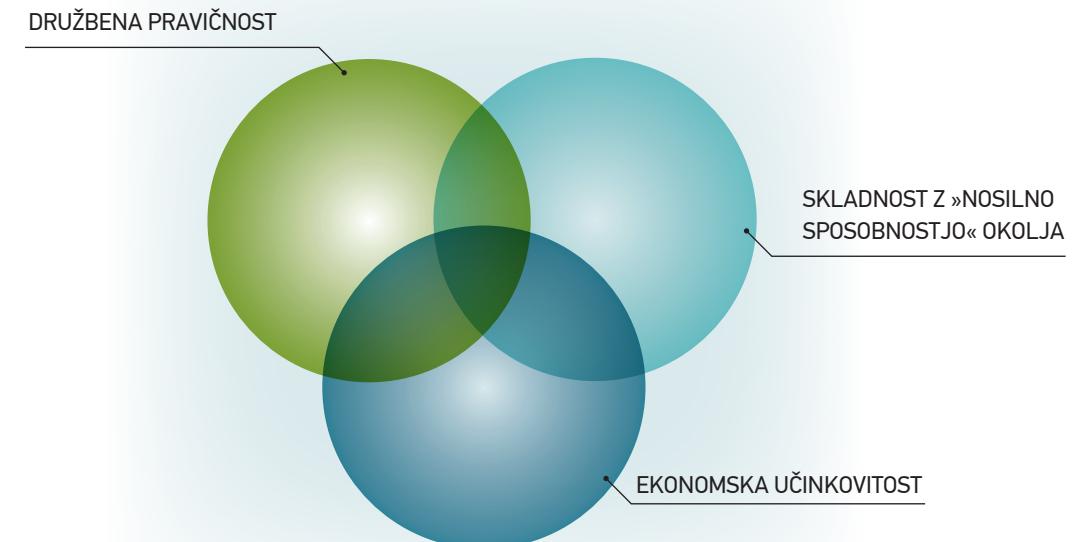
In prav zato je pred vami naše prvo trajnostno poročilo za leto 2009, ki mu bo sledilo naslednje. V prihodnje si bomo tako še odločneje prizadevali za vključevanje naših zaposlenih ter poslovnih in strokovnih partnerjev v razprave, ki lahko prispevajo k odgovornemu, na dejstvih temelječemu in zato rešitvenemu uresničevanju trajnostnega razvoja in skladno z njim zastavljene energetske prihodnosti Slovenije.

Zavedamo se, da naše prvo trajnostno poročilo, ki je pred vami, ponuja tudi priložnosti za vsebinske in podatkovne dopolnitve in izboljšave. In zdi se nam pomembno vedeti, kje in kako v prihodnje zapolniti današnje vrzeli ter tako prispevati k odgovornejšemu, natančnejšemu in jasnejšemu predstavljanju naših ukrepov, dosežkov, rešitev in načrtov za trajnostno energetsko prihodnost.

V osrednjih temah in razpredelnicah s kazalniki učinkovitosti našega posovanja, ki jih predstavljamo v nadaljevanju, smo si v največji možni meri prizadevali enakomerno predstaviti vse tri stebre trajnostnega razvoja: okoljskega, ekonomskega in družbenega oziroma socialnega. Predvsem pa smo se trudili vsako našo trditev v poročilu verodostojno podkrepiti s številčnimi podatki, čim natančnejšimi opisi aktivnosti in ukrepov.

Le tako lahko namreč po našem mnenju zanesljivo, odgovorno in celovito zasledujemo uresničevanje vizije trajnostne usmerjenosti tako navznoter, med družbami naše skupine, kot navzven, v odnosu do vseh naših deležnikov.

Skupina GEN  
uredniška skupina  
za pripravo trajnostnega poročila<sup>1</sup>



*Strateški stebri trajnostnega razvoja: okoljski, družbeni in ekonomski stebri*

<sup>1</sup> For further information about sustainable development or the Sustainability Report of the GEN Group, please contact us at [info@gen-energija.si](mailto:info@gen-energija.si).

<sup>1</sup> Kontakt za dodatna pojasnila ali informacije v zvezi s trajnostnim razvojem oziroma poročilom skupine GEN o trajnostnem razvoju: [info@gen-energija.si](mailto:info@gen-energija.si).

## 1.3 Summary of key topics

### *The GEN Group and sustainable development: Our measures, achievements, solutions and plans*

*The key positions held by the GEN Group regarding its operation today, tomorrow and the day after tomorrow and in general regarding the mid- and long-term future of electricity supply in Slovenia are communicated in the headings of our first Sustainability Report's main chapters.*

*The main chapters of this report address the topics that we believe play the crucial part from the perspective of the GEN Group's contribution towards sustainable development of Slovenia. The chapters illustrate the following aspects, among others:*

- ▶ *How we handle or evaluate individual topics – either as part of our business in the narrowest sense or as part of our wider responsibility to the environment in which we operate;*
- ▶ *What we have already accomplished in individual areas and what our plans for the future are; and*
- ▶ *What potentially restrictive or encouraging internal or external circumstances are there that interact with the planning process and implementation of measures.*

*Since we are fully aware of the importance of knowledge, information and awareness in the sphere of energy and energy industry, all of which may play a substantial role in developing a responsible, realistic discussion about Slovenia's energy future among various stakeholders, we have added small "info boxes" to some of the chapters. This way we would like to share with the readers of this report those technical bases or facts from the Slovenian, European and global environments that have also affected us, our operation or our positions regarding some of the main topics presented in this report.*

*We wish you a pleasant reading.*

*Detailed examinations of our positions, measures, achievements and plans regarding the main topics can be found in the body of this report and on the GEN Group website at [www.gen-energija.si](http://www.gen-energija.si). Below please find a brief overview of the main topics. Firstly because this way it will be easier for you to grasp the complexity of the subjects covered in this report. And secondly because we would also like to effectively convey information to readers that may want to glance through the report and only read individual topics of particular relevance.*



#### *Our sustainable portfolio helps reduce CO<sub>2</sub> emissions*

*As much as 99 percent of the GEN Group's electricity output in 2009 was generated from sustainable and renewable energy sources: nuclear, hydro and solar power. This makes for a large contribution towards low- or zero-carbon electricity production and to sustainable development of Slovenia. [Read more on page 14...](#)*



#### *Efficient electricity production*

*In the production of electricity from hydro and nuclear power we recorded a facility utilization rate of more than 90 percent in 2009. Our output exceeded the targets. [Read more on page 18...](#)*



#### *Making substantial investments in renewable energy sources*

*On the back of steady and effective operation, risk management, right and timely investments, and electricity trading and sales, the GEN Group creates investment potential, a large part of which is directed towards developing new, renewable energy sources for electricity production, mostly hydro and solar power. In 2009, investments at SEL (Savske elektrarne Ljubljana) for this purpose totalled EUR 8 million, TEB invested EUR 0.2 million in the construction of the first in a series of solar power plants, and the total amount invested by the entire GEN Group in HESS was EUR 4.6 million. [Read more on page 20...](#)*



## 1.3 Povzetek ključnih vsebin

**Skupina GEN in trajnostni razvoj: naši ukrepi, dosežki, rešitve in načrti**

Ključna stališča, ki jih skupina GEN zavzema glede svojega današnjega, jutrišnjega in po-jutrišnjega delovanja ter nasploh glede srednje- in dolgoročne prihodnosti oskrbe z električno energijo v Sloveniji, so zajeta že v naslovnih osrednjih poglavij našega prvega trajnostnega poročila.

V osrednjih poglavjih, ki sledijo, tako lahko preberete, katere teme so po našem mnenju ključnega pomena z vidika prispevka skupine GEN k trajnostnemu razvoju Slovenije. Med drugim opisujemo:

- ▶ *kako se jih – bodisi v okviru svojega najožje pojmovanega poslovnega delovanja bodisi v okviru svoje širše odgovornosti do okolja, v katerem delujemo – lotevamo oziroma jih vrednotimo,*
- ▶ *kaj smo na posameznih področjih že dosegli in kakšni so naši prihodnji načrti ter*
- ▶ *katere so morebitne omejujoče ali spodbujajoče notranje ali zunanje okoliščine, ki soplivajo na načrtovanje in uresničevanje ukrepov.*

Ker se zavedamo pomena znanja, obveščenosti in ozaveščenosti na področju energije in energetike, ki lahko pomembno prispevajo k oblikovanju odgovorne, realistične razprave med različnimi deležniki o energetske prihodnosti Slovenije, pri nekaterih poglavjih dodajamo tudi drobne »informacijske okvirčke«. Tako želimo s cenjenimi bralkami in bralcem tega poročila deliti tiste strokovne podlage ali dejstva iz slovenskega, evropskega ali globalnega okolja, ki so vplivala tudi na nas, naše delovanje oziroma naša stališča v odnosu do nekaterih od osrednjih vsebin, predstavljenih v tem poročilu.

*Vabljeni torej k branju!*

Podrobnejše predstavitve naših stališč, ukrepov, dosežkov in načrtov v zvezi z osrednjimi temami najdete v nadaljevanju poročila, ki je pred vami, pa tudi na spletnem mestu skupine GEN: [www.gen-energija.si](http://www.gen-energija.si). Tukaj jih le na kratko povzemamo. Prvič zato, da boste lažje pridobili občutek za celoto vsebin, ki jih poročilo zajema. Drugič pa zato, da smo učinkoviti tudi pri posredovanju vsebin tistim bralkam in bralcem, ki želite morda le na hitro preleteti ponujeni nabor vsebin in v njem izbrati posamezne, za vas posebej zanimive teme.



#### *S trajnostnim portfeljem prispevamo k nižjim emisijam CO<sub>2</sub>*

Devetindvetdeset odstotkov električne energije, proizvedene v skupini GEN v letu 2009, smo pridobili iz trajnostnih in obnovljivih virov energije: jedrske energije ter vodne in sončne energije. To je pomemben prispevek k nizko- oziroma brezogljični proizvodnji električne energije in k trajnostnemu razvoju Slovenije. [Več na strani 15 ...](#)



#### *Učinkovito proizvajamo električno energijo*

V letu 2009 smo pri proizvodnji električne energije iz vodne in jedrske energije dosegli več kot 90-odstotno izkoristenost objektov. Naša realizacija je presegla zastavljene načrte. [Več na strani 19 ...](#)



#### *Intenzivno vlagamo v obnovljive vire energije*

V skupini GEN z dobrim in učinkovitim obratovanjem, z obvladovanjem tveganj, s pravilnimi in pravočasnimi investicijami ter s trgovanjem in prodajo električne energije ustvarjamо investicijski potencial, ki ga v veliki meri usmerjamо v razvoj novih, obnovljivih virov za proizvodnjo električne energije, predvsem vodne in sončne energije. V letu 2009 so naložbe Savskih elektrarn Ljubljana na tem področju znašale 8 milijonov evrov, v TEB so v izgradnjo prve v nizu sončnih elektrarn vložili 0,2 milijona evrov, naložbe celotne skupine v HESS pa so znašale 4,6 milijonov evrov. [Več na strani 21 ...](#)





### *Working to promote nuclear power*

One of the GEN Group's focal strategic development projects is JEK 2: the construction of a second unit of Krško Nuclear Power Plant. The project plays a vital role in closing, or rather narrowing, the energy gap in Slovenia, reducing CO<sub>2</sub> emissions, preserving natural areas and plant and animal diversity, increasing the reliability of supply and stabilizing the price of electricity in the country. Feasibility studies into the construction of the second unit of Krško Nuclear Power Plant (JEK 2) were completed in 2009, which found that the project is highly efficient in environmental and economic terms. [Read more on page 26...](#)



### *Promoting energy efficiency*

We know full well that energy efficiency is crucial in reaching the strategic goals of the European (and Slovenia's) energy policy. This is why we have taken up an active role in spreading information, educating, and raising awareness with the purpose of promoting efficient use of energy among various focus groups, mostly students and consumers of electricity. More than 50 institutions participate in our Energy-Efficient School project in the 2009/10 school year. [Read more on page 28...](#)



### *Aware of the importance of having knowledgeable employees*

In order to fulfil our vision we need knowledgeable, committed and responsible people. Of the nearly 1000 employees in the GEN Group, almost one-half hold a higher-education or university degree. We constantly seek to upgrade and refresh the knowledge of our employees. [Read more on page 32...](#)



### *Carefully planned development of our future workforce*

Due to their ambitious character and focus on development, the companies in the GEN Group are constantly faced with the need for new, highly educated and skilled people with specialist knowledge. This is why we make carefully planned investments in the development and recruitment of human resources from various spheres of knowledge, particularly natural science and technical areas such as physics, electrical engineering, computer science, and mechanical engineering. In 2009, under our own company scholarship system (nationwide) and under the Posavje Scholarship Scheme (region-wide), we awarded scholarships to 83 secondary school and university students enrolled in relevant study programmes. [Read more on page 34...](#)



### *Seeking to ensure a better understanding of energy-related topics*

Knowledge and awareness about energy, the energy industry and energy-related issues are key to a proper understanding of energy programmes, plans and strategic energy investments, all of which substantially affect the lives of every citizen. By promoting and backing events and projects aiming to raise and broaden the knowledge of energy and the energy industry, we at the GEN Group add our share to ensuring a better understanding of the energy sphere around Slovenia. [Read more on page 36...](#)



### *Active cooperation with the local communities*

In the context of fulfilling our corporate responsibility to society, we gave away EUR 517,050 in sponsorships and donations to various groups and institutions in 2009 to support their activities, events and projects in the areas of sport, culture, education, and environmental protection. [Read more on page 40...](#)



### *Zavzemamo se za krepitev rabe jedrske energije*

Eden osrednjih strateških razvojnih projektov skupine GEN je JEK 2: izgradnja drugega bloka jedrske elektrarne v Krškem. Projekt ima odločilno vlogo pri zapiranju oziroma zmanjševanju energetske vrzelj v Sloveniji, zmanjšanju količin izpustov CO<sub>2</sub>, ohranjanju naravnih površin ter rastlinske in živalske raznolikosti, povečanju zanesljivosti oskrbe in stabilizaciji cene električne energije v Sloveniji. V letu 2009 smo zaključili s študijami upravičenosti postavitev drugega bloka jedrske elektrarne Krško (JEK 2), ki so utemeljile visoko okoljsko in ekonomsko učinkovitost projekta. [Več na strani 27 ...](#)



### *Spodbujamo k učinkoviti rabi energije*

Zavedamo se, da je energetska učinkovitost bistvena za doseganje strateških ciljev evropske (in s tem slovenske) energetske politike. Zato aktivno delujemo na področju obveščanja, izobraževanja in ozaveščanja, katerih namen je spodbujati učinkovito rabo energije (URE) med različnimi ciljnimi skupinami, predvsem pa šolajočimi se otroki in mladino ter končnimi odjemalci električne energije. V projektu Energetsko varčna šola v šolskem letu 2009/10 sodeluje že več kot 50 ustanov. [Več na strani 29 ...](#)



### *Zavedamo se pomena znanja zaposlenih*

Za uresničevanje naše vizije potrebujemo ljudi z znanjem, ki so hkrati predani in odgovorni. Od skoraj 1000 zaposlenih v skupini GEN jih ima skoraj polovica višješolsko ali univerzitetno izobrazbo. Prizadevamo si nenehno dopolnjevati in osveževati znanje zaposlenih. [Več na strani 33 ...](#)



### *Premišljeno razvijamo bodoče kadre*

V družbah skupine GEN se zaradi ambiciozne razvojne naravnosti nenehno srečujemo s potrebo po novih, visoko izobraženih in usposobljenih kadrih s specjalističnimi znanji. Zato načrtovano vlagamo v razvoj in pridobivanje kadrov z različnih, predvsem naravoslovno-tehničkih področij, kot so fizika, elektrotehnika, računalništvo in strojništvo. V letu 2009 smo prek lastnega sistema kadrovskih štipendij (na nacionalni ravni) in prek Posavske štipendijske sheme (na regionalni ravni) štipendirali 83 dijakov in študentov ustreznih študijskih področij. [Več na strani 35 ...](#)



### *Prizadevamo si za boljše razumevanje energetskih tem*

Znanje in ozaveščenost o energiji, energetiki in energetskih vprašanjih sta ključnega pomena za razumevanje energetskih programov, načrtov ter strateških energetskih investicij, ki pomembno vplivajo na življenja državljanov in državljanov. V skupini GEN s spodbujanjem in podpiranjem dogodkov in projektov za povečevanje in širjenje znanja o energiji in energetiki prispevamo k povečevanju razumevanja energetskega področja v Sloveniji. [Več na strani 37 ...](#)



### *Aktivno sodelujemo z lokalnimi skupnostmi*

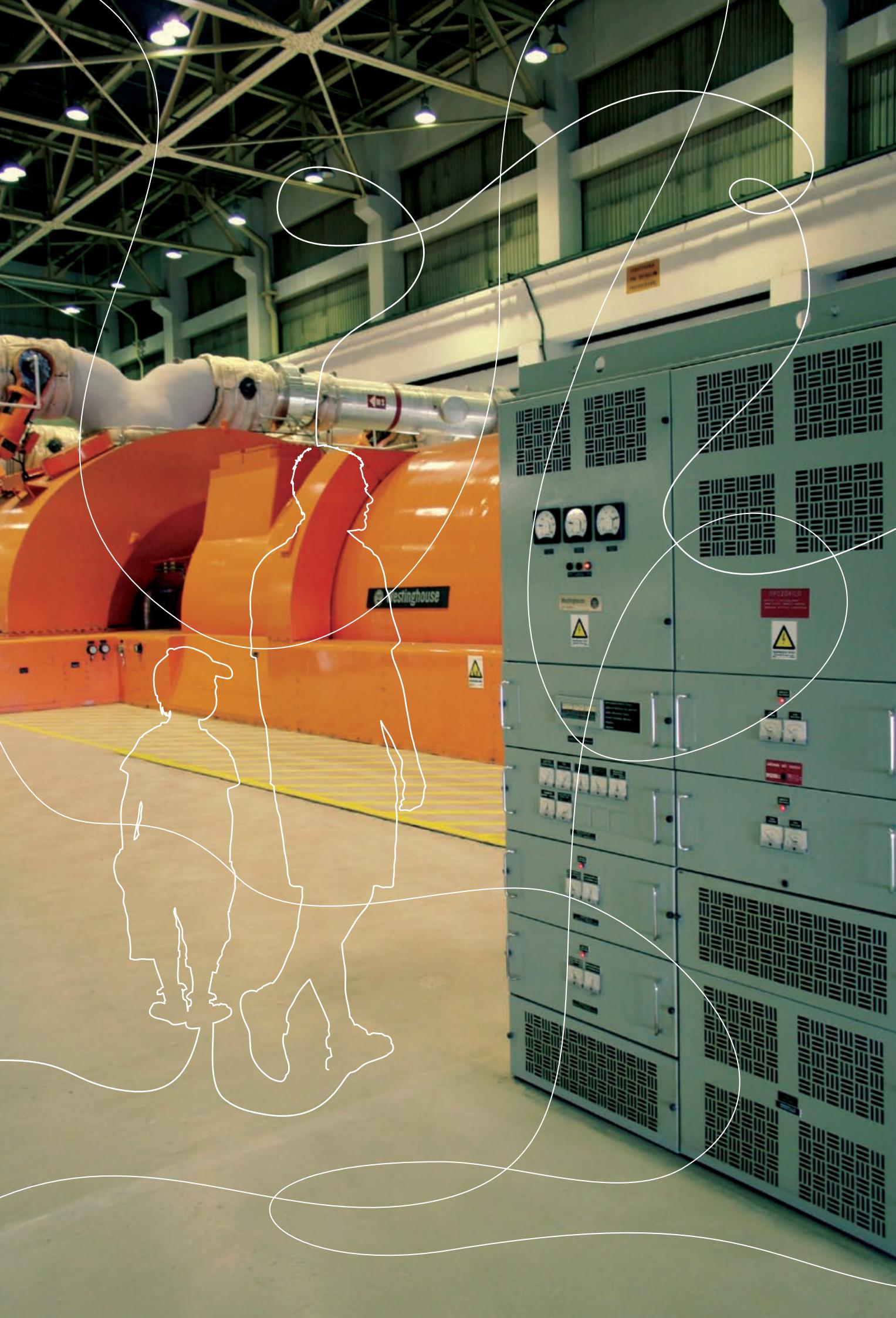
V okviru uresničevanja svoje odgovornosti do družbe smo v letu 2009 različnim skupinam in ustanovam oziroma njihovim dejavnostim, dogodkom in projektom na področjih športa, kulture, izobraževanja ter varstva okolja namenili 517.050 EUR v obliki sponzorstev in donacij. [Več na strani 41 ...](#)

Zanesljivo in trajnostno naravnano oskrbujemo z električno energijo.  
Na fotografiji: Generator v Nuklearni elektrarni Krško.

Providing a reliable, sustainability-focused electricity supply.  
Photo: Krško Nuclear Power Plant generator.



## 2. Osrednje teme 2. Main topics



## 2.1 Our sustainable portfolio helps reduce CO<sub>2</sub> emissions

As much as 99 percent of the GEN Group's electricity output in 2009 was generated from sustainable and renewable energy sources: nuclear, hydro and solar power. This makes for a large contribution towards low- or zero-carbon electricity production and to sustainable development of Slovenia.

By generating electricity from sustainable and renewable energy sources, the GEN Group makes a significant contribution towards safeguarding the environment and slowing climate change. One of the important keystones of the European, and along with it Slovenian, energy policy is its orientation towards sustainability, since the production and consumption of electricity produce as much as 80 percent of all greenhouse gases in the EU.

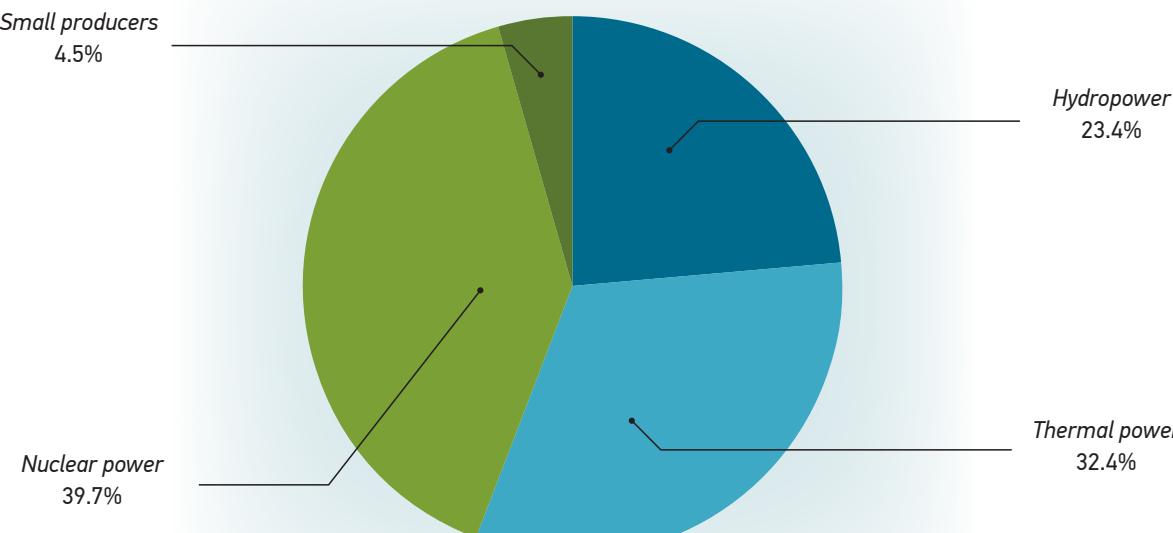
The EU aims to reduce greenhouse-gas emissions in the EU and worldwide down to a level that would limit the temperature increase to not more than 2 degrees Celsius above pre-industrial levels. On the Slovenian scale, the GEN Group's share towards meeting this goal is significant.

**Table 1:** Our electricity production portfolio is based primarily on sustainable and renewable energy sources

Type of energy	Power plant	Electricity output in 2009 (MWh)	Electricity output in 2009 (% of the GEN Group's total output)
Nuclear power	Krško Nuclear Power Plant – NEK	2,723,000	87.6%
Hydropower	Savske elektrarne Ljubljana – SEL Hidroelektrarne na Spodnji Savi – HESS	385,000	12.4%
Solar power	small-scale photovoltaic power plants (SPP): SEL SPP; Mavčiče SPP, Medvode SPP, Vrhovo SPP, Brestanica SPP	269	0.008%

The bulk of electricity generated in 2009 came from the nuclear power plant (NEK) and the hydroelectric power plants (SEL and HESS)<sup>2</sup>. Electricity generated at the gas-steam power plant (Brestanica Thermal Power Plant – TEB) accounted for 0.3% of the Group's total output. The small percentage of the total output is due to the power plant's principal function within the Group, which is to provide a backup service in the event of failures of larger units in Slovenia's national electric power grid.

**Figure 1:** Structure of electricity production sources in Slovenia in 2008<sup>3</sup>



## 2.1 S trajnostnim portfeljem prispevamo k nižim emisijam CO<sub>2</sub>

Devetindevetdeset odstotkov električne energije, proizvedene v skupini GEN v letu 2009, smo pridobili iz trajnostnih in obnovljivih virov energije: jedrske energije ter vodne in sončne energije. To je pomemben prispevek k nizko- oziroma brezogljivi proizvodnji električne energije in k trajnostnemu razvoju Slovenije.

Skupina GEN s proizvodnjo električne energije iz trajnostnih in obnovljivih virov energije pomembno prispeva k ohranjanju okolja in upočasnjevanju podnebnih sprememb. Eden pomembnih temeljev evropske in s tem slovenske energetske politike je namreč njena trajnostna naravnost, saj pri proizvodnji in porabi energije nastane kar 80 odstotkov vseh emisij toplogrednih plinov v EU.

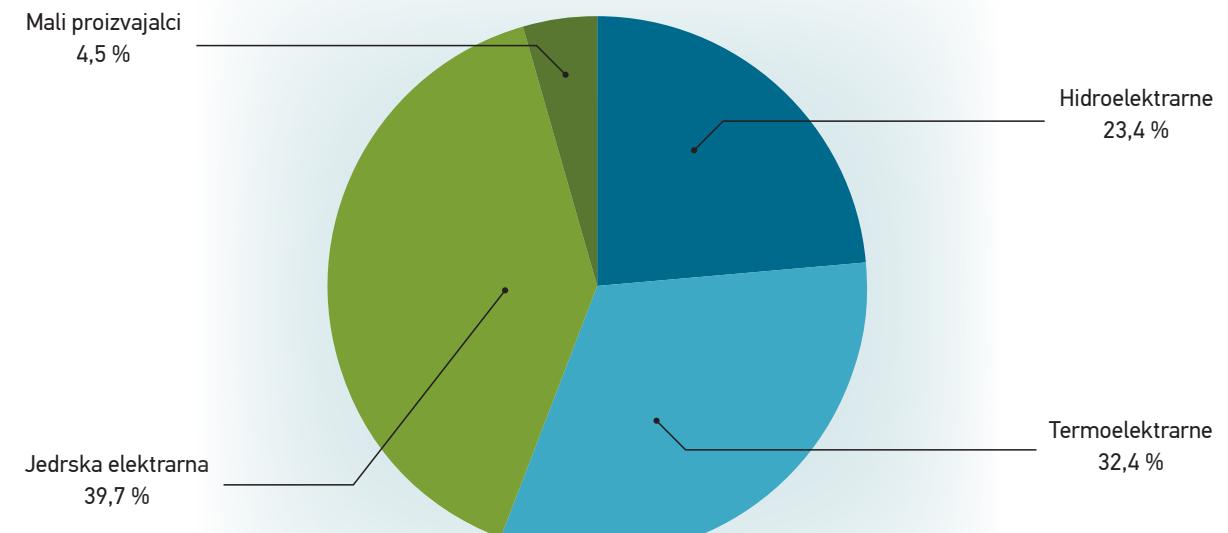
Cilj EU je zmanjšanje emisij toplogrednih plinov v EU in po svetu na raven, ki bi omejila dvig temperature za 2 stopinji Celzija v primerjavi s temperaturami v predindustrijskem obdobju. Skupina GEN v slovenskem merilu pomembno prispeva k uresničevanju tega cilja.

**Tabela 1:** Naš portfelj proizvodnje električne energije temelji predvsem na trajnostnih in obnovljivih virih energije

Vrsta energije	Elektrarna	Proizvedena el. energija v 2009 (MWh)	Proizvedena el. energija v 2009 (% v celotni proizvodnji skupine GEN)
Jedrska energija	Nuklearna elektrarna Krško – NEK	2.723.000	87,6 %
Vodna energija	Savske elektrarne Ljubljana – SEL Hidroelektrarne na Spodnji Savi – HESS	385.000	12,4 %
Sončna energija	male fotovoltaične elektrarne (MFE): MFE SEL: MFE Mavčice, MFE Medvode, MFE Vrhovo, MFE Brestanica	269	0,008 %

Največji delež električne energije smo v 2009 pridobili iz jedrske elektrarne (NEK) in hidroelektrarn (SEL in HESS)<sup>2</sup>. Proizvodnja električne energije iz plinsko-parne elektrarne (Termoelektrarna Brestanica – TEB) je znašala 0,3 % celotne proizvodnje v skupini. Majhen obseg proizvodnje izhaja iz njene osnovne funkcije v skupini, saj je namenjena predvsem pokrivanju izpadov večjih enot v elektroenergetskem sistemu Slovenije.

**Slika 1:** Struktura proizvodnih virov električne energije v Sloveniji v letu 2008<sup>3</sup>



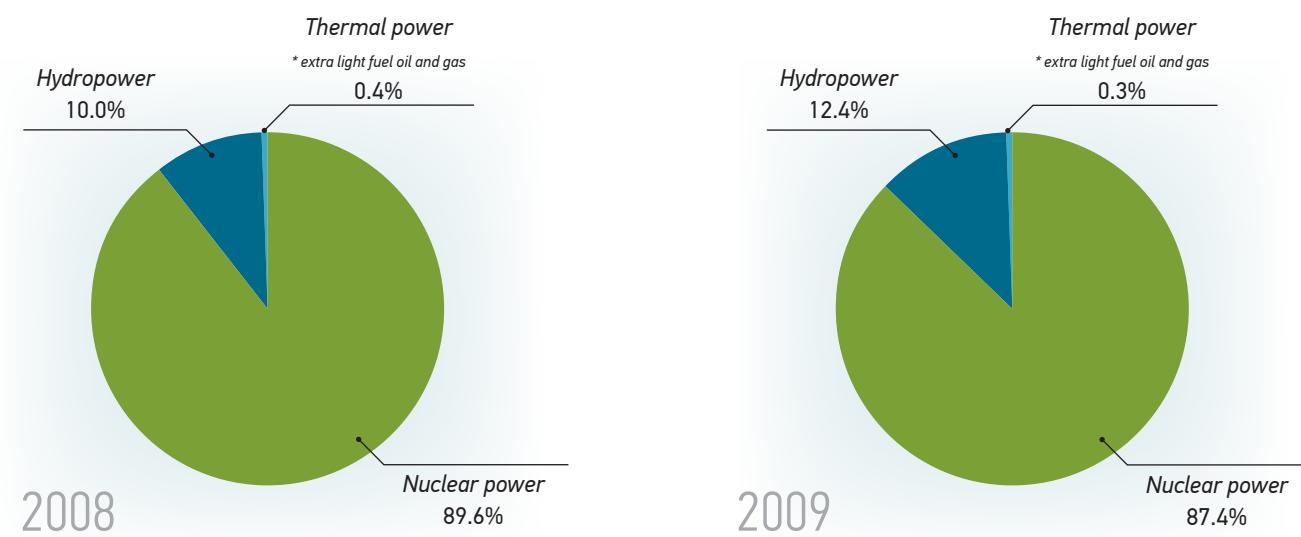
<sup>2</sup> The GEN Group's strategic development projects in the area of promoting the use of solar energy are examined separately – See Chapter 2.3.

<sup>3</sup> Based on data from the most recent report released before the Sustainability Report of the GEN Group for 2009 came out: "Report on the energy sector in Slovenia for 2008" (Energy Agency of the Republic of Slovenia; Maribor, June 2009).

<sup>2</sup> Strateške razvojne projekte skupine GEN na področju spodbujanja rabe sončne energije obravnavamo posebej, v poglavju 2.3.

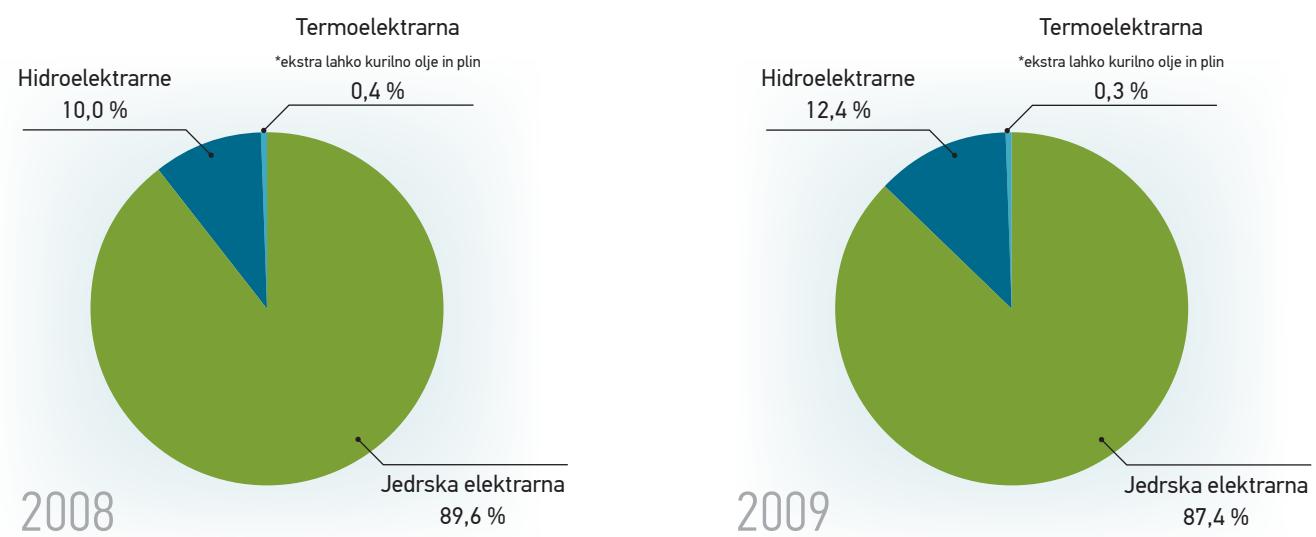
<sup>3</sup> Zajeti so podatki iz zadnjega poročila, izdanega pred objavo trajnostnega poročila skupine GEN za leto 2009: »Poročilo o stanju na področju energetike v Sloveniji v letu 2008« (Javna agencija RS za energijo; Maribor, junij 2009).

**Figure 2:** Structure of electricity production sources in the GEN Group in 2008 and 2009



From the perspective of CO<sub>2</sub> emissions, our production portfolio, compared with the overall national portfolio of the structure of electricity production sources, is environmentally acceptable and oriented towards sustainability. The graphs show the comparison of the structure of electricity production sources in Slovenia for 2008 (Source: "Report on the energy sector in Slovenia for 2008", Energy Agency of the Republic of Slovenia; Maribor, June 2009) and in the GEN Group for 2008 and 2009 (Source: "Annual Report 2009", GEN Group; Krško, May 2010)

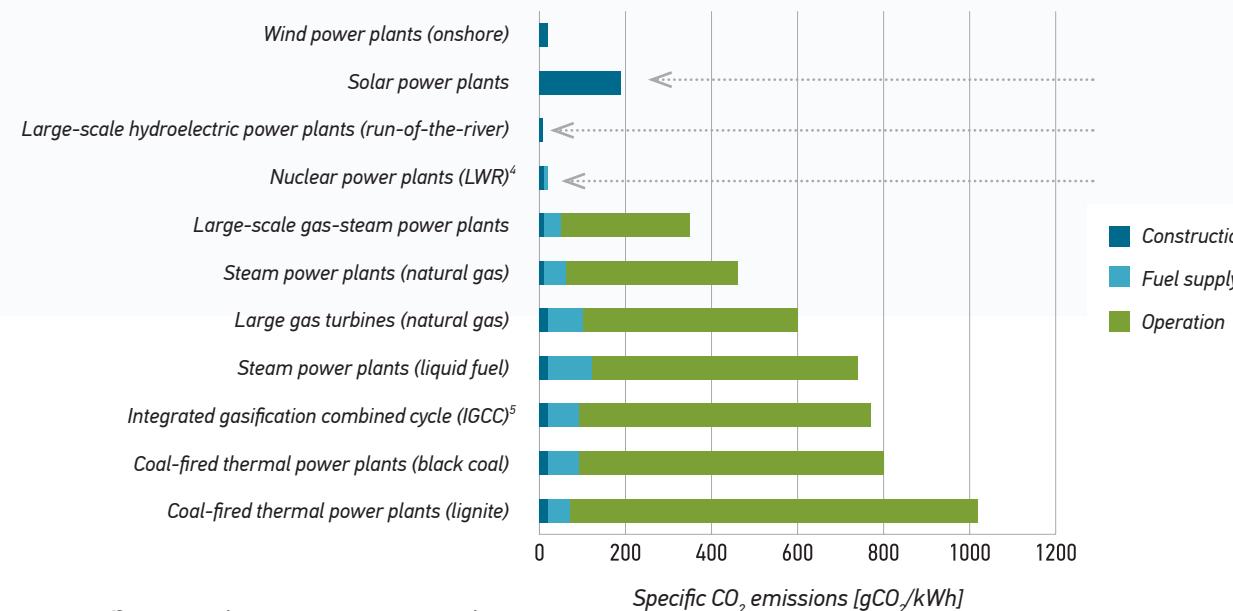
**Slika 2:** Struktura proizvodnih virov električne energije v skupini GEN v letih 2008 in 2009



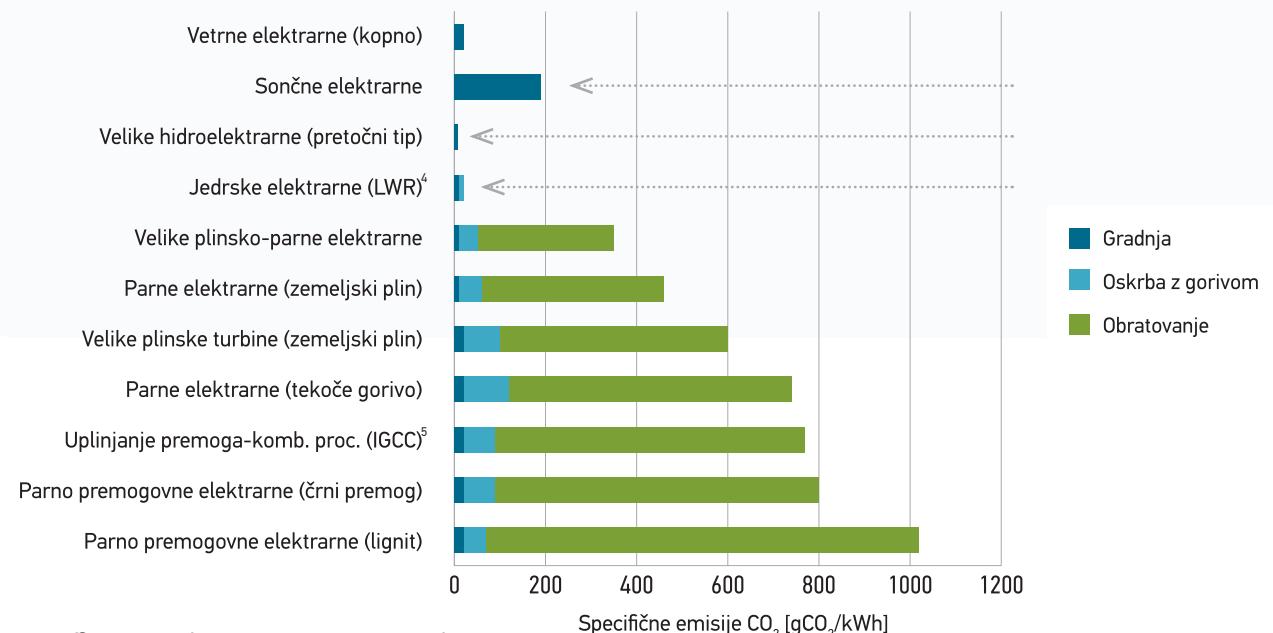
Naš proizvodni portfelj je z vidika izpustov CO<sub>2</sub> v primerjavi s skupnim nacionalnim portfeljem strukture proizvodnih virov električne energije okoliško sprejemljiv in trajnostno naravnal. Iz grafov je razvidna primerjava strukture proizvodnih virov električne energije v Sloveniji v letu 2008 (vir: »Poročilo o stanju na področju energetike v Sloveniji v letu 2008«, Javna agencija RS za energijo; Maribor, junij 2009) ter skupine GEN za leti 2008 in 2009 (vir: Letno poročilo za leto 2008 in 2009, Skupina GEN; Krško, april 2009 in maj 2010)



**Figure 3:** Specific CO<sub>2</sub> emissions during the service life of an individual electricity production technology (comparison of CO<sub>2</sub> emissions per unit of electricity generated – in gCO<sub>2</sub>/kWh)



**Slika 3:** Specifične emisije CO<sub>2</sub> v celotni življenjski dobi posamezne tehnologije za proizvodnjo električne energije (primerjava emisij CO<sub>2</sub> na enoto proizvedene električne energije – v gCO<sub>2</sub>/kWh)



CO<sub>2</sub> emissions in electricity generation from sustainable and renewable energy sources – from which electricity is predominantly generated at the GEN Group's production facilities – are among the lowest compared to other energy sources or electricity generation systems.

4 LWR - light water reactor, lakovodni reaktor

5 IGCC - integrated gasification combined cycle

Emisije CO<sub>2</sub> so pri proizvodnji električne energije iz trajnostnih in obnovljivih virov, iz katerih pretežno pridobivamo električno energijo v proizvodnih enotah skupine GEN, v primerjavi z drugimi viri energije oziroma sistemi za proizvodnjo električne energije med najnižjimi.

4 LWR - light water reactor, lakovodni reaktor

5 IGCC - integrated gasification combined cycle

## 2.2 Efficient electricity production

In the production of electricity from hydro and nuclear power we recorded a high facility utilization rate in 2009. The output was higher than planned.

The development of modern electricity production technologies strives to yield as high utilization rates as possible. The higher the utilization rate of a given technology, the less energy has to be put in per unit of electricity generated. This, in turn, reduces not only production costs but also emissions of various substances into the environment.

The companies in the Group together yield between 5,600 and 6,300 gigawatt-hours of electricity per year. This figure accounts for around 40% of all electricity generated in Slovenia. After Croatia receives its share of electricity from NEK, the GEN Group's share accounts for around 30% of all electricity generated at Slovenia's power plants.

We had 3,117 GWh of electricity at our disposal in 2009. Our business in 2009 was marked by a very stable and efficient operation of all the production units in the Group.

### GEN Control Centre

Good electricity production results of the GEN Group can also be attributed to the establishment of the common GEN Control Centre (NC GEN), which brings together in one spot activities of individual companies in the Group, at the highest level, both functionally and technically, with the aim of allowing maximum utilization of available production resources, as well as seizing opportunities presented by the access to domestic and international electricity markets.

With the establishment of the GEN Control Centre, already in 2008 the GEN Group's production portfolio evolved into a uniform energy-generation group, with the parent company GEN energija at its helm. Thanks to the GEN Control Centre, the production units operate in alignment and we are able to effectively mitigate effects of any unforeseeable event, which has a positive impact on our business results<sup>6</sup>.

#### 2.2.1 Efficient electricity production at NEK

At the nuclear power plant (the limited liability company Nuklearna elektrarna Krško d.o.o. – NEK), which is part of the GEN Group, high levels of safety and availability in 2009 were possible all thanks to effective regulation and strict control over work performed during regular operation and during planned maintenance shutdown.

Under the common Performance Indicator Index (defined at the international level to facilitate operation performance monitoring and comparison among power plants), NEK's aim for 2009 was to record an index value of at least 91 – in reality the index for NEK stood at 100. Based on this result, NEK ranked in the top 25% of best-performing nuclear power stations in the world.

In 2009 NEK exceeded its electricity output targets by 1.11%, and the utilization index at 93.58%.

#### 2.2.2 Efficient electricity production at SEL

Generating electricity exclusively from renewable energy sources, this GEN Group company (the limited liability company Savske elektrarne Ljubljana d.o.o. – SEL) taps on the hydropower potential of the Sava River and its tributaries in Slovenia's only water-reservoir hydroelectric power plant Moste and in the hydroelectric power plants Mavčiče HPP, Medvode HPP and Vrhovo HPP.

After being in service for more than 50 years, the older hydroelectric power plants are undergoing intensive reconditioning, where, apart from extending the service life, a lot of attention is placed particularly on:

- ▶ increasing the utilization rates of generating units and the power plants as a whole,
- ▶ boosting the output, reliability, flexibility and quality of electricity,
- ▶ putting hydroelectric power plants under remote control, and
- ▶ increasing their environmental acceptability.

<sup>6</sup> See Chapter 3.1 for the Group's business performance.

## 2.2 Učinkovito proizvajamo električno energijo

V letu 2009 smo pri proizvodnji električne energije iz vodne in jedrske energije dosegli visoko izkoriščenost objektov. Naša realizacija je bila višja od načrtovane.

Razvoj sodobnih tehnologij za proizvodnjo električne energije teži k doseganju čim večjih izkoristkov. Večji kot so izkoristki posamezne tehnologije, manj energije je treba vložiti na enoto dobljene električne energije. Tako se po eni strani zmanjšajo stroški proizvodnje, po drugi strani pa seveda tudi emisije različnih snovi v okolje.

Podjetja v naši skupini letno skupaj proizvedejo med 5.600 in 6.300 gigavatnih ur električne energije. To je okoli 40 odstotkov vse električne energije, proizvedene v Sloveniji. Po oddaji hrvaškega dela električne energije iz NEK znaša delež proizvodnje skupine GEN približno 30 odstotkov vse električne energije, proizvedene v slovenskih elektrarnah.

V letu 2009 smo razpolagali s 3.117 GWh električne energije. Naše poslovanje je v letu 2009 zaznamovalo zelo stabilno in učinkovito obratovanje proizvodnih objektov v skupini.

### Nadzorni center GEN

K dobrim rezultatom proizvodnje električne energije v skupini GEN pomembno prispeva vzpostavitev skupnega nadzornega centra GEN, ki na najvišji ravni funkcionalno in tehnično združuje ter zaokroža dejavnosti posameznih podjetij v skupini s ciljem maksimalnega izkoriščanja razpoložljivih proizvodnih virov ter priložnosti, ki jih ponuja dostop do domačega in mednarodnih trgov z električno energijo.

Z razvojem lastnega nadzornega centra je proizvodni portfelj skupine GEN že v letu 2008 prerasel v enovito energetsko skupino z matično družbo GEN energija kot njenim nosilcem. S pomočjo nadzornega centra GEN proizvodne enote delujejo usklajeno, učinke nenačrtovanih dogodkov pa lahko učinkovito ublažimo, kar se pozitivno odraža v naših poslovnih rezultatih<sup>6</sup>.

#### 2.2.1 Učinkovita proizvodnja električne energije v NEK

V jedrski elektrarni (družba Nuklearna elektrarna Krško d.o.o. ali krajše NEK), ki je del skupine GEN, so tudi v letu 2009 visoko stopnjo varnosti in razpoložljivosti elektrarne zagotavljali z učinkovitim vodenjem obratovanja in strogim nadzorom del med obratovanjem ter med načrtovanim remontom.

Cilj skupnega kazalca obratovalne učinkovitosti NEK za leto 2009 (t. i. Performance Indicator Index, ki je na mednarodni ravni definiran zaradi lažjega spremeljanja učinkovitosti obratovanja in primerjanja med elektrarnami) je bil doseči vrednost najmanj 91, dejansko pa je NEK dosegel vrednost 100. Na podlagi tega rezultata se je NEK uvrstil v zgornjo četrtino najučinkoviteje obratujocih jedrskih elektrarn v svetu.

V letu 2009 je NEK proizvedel 1,11 % več električne energije od načrtovane količine, kazalec izkoriščenosti pa je bil 93,58 %.

#### 2.2.2 Učinkovita proizvodnja električne energije v SEL

V družbi skupine GEN, ki za proizvodnjo električne energije uporablja izključno obnovljive vire energije (družba Savske elektrarne Ljubljana d.o.o. ali krajše SEL), izkoriščajo hidroenergetski potencial reke Save in njenih pritokov v edini slovenski akumulacijski hidroelektrarni Moste ter v HE Mavčiče, HE Medvode in HE Vrhovo.

Po več kot 50 letih obratovanja starejše hidroelektrarne intenzivno obnavljajo, pri čemer dajejo poleg podaljšanja življenjske dobe velik poudarek predvsem:

- ▶ povečevanju izkoristkov agregatov in hidroelektrarne kot celote,
- ▶ povečanju proizvodnje, zanesljivosti, fleksibilnosti in kakovosti električne energije,
- ▶ daljinskemu vodenju hidroelektrarn in
- ▶ povečanju njihove okoljske sprejemljivosti.

<sup>6</sup> Glej poglavje 3.1 o poslovni uspešnosti skupine.

In recent years the company has expanded its portfolio of renewable energy sources with photovoltaic power plants set up at individual hydroelectric power plants.

In 2009, small-scale hydroelectric power plants and solar power plants together generated 0.64 GWh of electricity. During the reconditioning efforts, turbine utilization rates have increased by 5 to 6 percent, and the installation of new transformers and the reduction in transformations have resulted in lower overall electricity transformation losses that occur on the way from the production source to the consumer.

Due to favourable hydrological conditions and good operational reliability of generating units (the availability ratio in 2009 was 0.9998), the company registered a record output in the first six months of 2009, and the annual output was 16.4% higher than planned. Overall, the utilization rates of all their hydroelectric power plants ranged between 83 and 88 percent.

Table 2: GEN's performance in 2009 – planned and actual electricity output of the GEN Group in GWh in 2009

	2009		
	Plan	Performance	Ratio
GEN Group	3,038	3,108	1.0230

We have exceeded our electricity output targets by 2.3% in 2009. Note, however, that the above statistics do not take into account the electricity output of TEB, which operates under a special regimen and serves a special purpose: to provide ancillary services.

V zadnjih letih v družbi svoj proizvodni portfelj obnovljivih virov energije dopolnjujejo še s postavitevijo fotonapetostnih elektrarn na posamezne hidroelektrarne.

V letu 2009 je bilo v malih hidroelektrarnah in sončnih elektrarnah proizvedenih 0,64 GWh električne energije. V okviru obnov so se izkoristki na turbinah povečali za od 5 do 6 odstotkov, z vgradnjo novih transformatorjev in znižanjem transformacij pa se znižujejo celotne izgube transformacije električne energije od proizvodnega vira do končnega porabnika.

V letu 2009 so imeli ob ugodni hidrologiji in dobri obratovalni zanesljivosti agregatov (faktor razpoložljivosti v letu 2009 je znašal 0,9998) v prvem polletju rekordno proizvodnjo, na letni ravni pa je bila proizvodnja za 16,4 % višja od načrtovane. Izkoristki na skupni ravni vseh hidroelektrarn so znašali med 83 in 88 odstotki.

Tabela 2: Realizacija GEN v 2009 – načrt in proizvodnja električne energije skupine GEN v letu 2009 v GWh

	2009		
	Načrt	Realizacija	Doseg
Skupina GEN	3.038	3.108	1,0230

V letu 2009 smo za 2,3 % presegli načrtovano proizvodnjo električne energije, pri čemer je iz statistike izvzeta proizvodnja v TEB, za katero velja poseben režim delovanja, ki izhaja iz osnovne naloge elektrarne, tj. zagotavljanja sistemskih storitev.

## 2.3 Making substantial investments in renewable energy sources

On the back of steady and effective operation, risk management, right and timely investments, and electricity trading and sales, the GEN Group is able to create investment potential, a large part of which is directed towards developing new, renewable energy sources for electricity production, mostly hydro and solar power. In 2009, investments at SEL (Savske elektrarne Ljubljana) for this purpose totalled EUR 8 million, TEB invested EUR 0.2 million in the construction of the first in a series of solar power plants, and the total amount invested by the entire GEN Group in HESS was EUR 4.6 million.

### 2.3.1 Hydropower

A natural, environmentally friendly and zero-carbon source of electricity, hydropower is at the heart of the GEN Group. Investment in increasing the hydropower-based production capacity is one of the key strategic goals of the Group. We are thoroughly familiar with the technology and regulation of hydroelectric power plants and have an outstanding track record. In line with the natural resources and our technological capacity, we are working and will continue to work hard to move forward the project of building hydroelectric power plants on the lower Sava River (HESS).

In addition to making financial investments in this project, the GEN Group, with the expertise and experience of its people and with strategically driven training, also makes a valuable contribution to the operation and maintenance of the existing hydroelectric power plants, Boštanj HPP and Blanca HPP.

This way we directly (the HESS project) and indirectly (Boštanj and Blanca HPPs) strengthen and expand our production portfolio in the area of renewable energy sources.

### 2.3.2 Solar power

In the context of promoting zero-carbon electricity generation, the GEN Group recognizes investment in solar power as a development area of particular importance. We acknowledge the fact that the production capacity of solar power plants in relation to other zero-carbon sources in the Group is limited, but through proper development of knowledge and human resources we seek to promote optimal development of new technologies for harnessing this energy source as one of the aspects of sustainable electricity production.

This is why the Group companies SEL and TEB also focus their expertise and investments on photovoltaics and the construction of solar power plants.

## 2.3 Intenzivno vlagamo v obnovljive vire

V skupini GEN z dobrim in učinkovitim obratovanjem, z obvladovanjem tveganj, s pravilnimi in pravočasnimi investicijami ter s trgovanjem in prodajo električne energije ustvarjamо investicijski potencial, ki ga v veliki meri usmerjamо v razvoj novih, obnovljivih virov za proizvodnjo električne energije: predvsem vodne in sončne energije. V letu 2009 so naložbe Savskih elektrarn Ljubljana na tem področju znašale 8 milijonov evrov, v TEB so v izgradnjo prve v nizu sončnih elektrarn vložili 0,2 milijona evrov, naložbe celotne skupine v HESS pa so znašale 4,6 milijonov evrov.

### 2.3.1 Vodna energija

Vodna energija kot naraven, okolju prijazen in brezogljichen vir za proizvodnjo električne energije je za skupino GEN osrednjega pomena. Investiranje v nove proizvodne zmogljivosti na podlagi vodne energije je tako eden ključnih strateških ciljev naše skupine. Tehnologijo in obratovanje hidroelektrarn dobro poznamo in imamo z njimi odlične izkušnje. Skladno z naravnimi danostmi in tehnološkimi zmogljivostmi si zato že prizadevamo in si bomo tudi v prihodnje prizadevali spodbujati razvoj projekta izgradnje hidroelektrarn na spodnji Savi (HESS).

Poleg vlaganja finančnih sredstev v omenjeni projekt pa skupina GEN z znanjem in izkušnjami svojih zaposlenih ter strateško načrtovanim usposabljanjem pomembno prispeva tudi k obratovanju in vzdrževanju obstoječih hidroelektrarn, in sicer HE Boštanj in HE Blanca.

Tako neposredno (projekt HESS) in posredno (HE Boštanj in HE Blanca) uresničujemo krepitev in širitev lastnega proizvodnega portfelja na področju obnovljivih virov energije.

### 2.3.2 Sončna energija

V okviru spodbujanja brezogljične proizvodnje električne energije v skupini GEN prepoznavamo vlaganja v sončno energijo kot še posebej pomembno razvojno področje. Zavedamo se, da so proizvodne zmogljivosti sončnih elektrarn v primerjavi z ostalimi brezogljičnimi viri v naši skupini omejene, vendar želimo z razvojem znanja in kadrov spodbujati optimalen razvoj novih tehnologij za rabo tega vira energije kot enega od elementov trajnostne proizvodnje električne energije.

Naši družbi SEL in TEB zato svoje strokovno znanje in investicije usmerjata tudi v fotovoltaiko in izgradnjo sončnih elektrarn.

**Table 3:** GEN Group's existing electricity output – solar power (2009)

GEN Group company / Production facility	Installed capacity (kW)	Total output in 2009 (in GWh)
<b>1. SEL</b>		
► Mavčiče SPP	71.4	
► Medvode 1 SPP	58.8	0.23
► Vrhovo 1 SPP	77.4	
<b>2. TEB</b>		
► TEB 1 SPP	38.1	0.04

**Table 4:** GEN Group's electricity output targets – solar power (2010 and 2011)

GEN Group company / Production facility	Installed capacity (kW)	Output targets for 2010 or *2011 (in GWh)
<b>1. SEL</b>		
► Medvode 2 SPP	30	0.03
► Vrhovo 2 SPP	355	0.37
<b>2. TEB</b>		
► TEB 2 SPP	82	0.08
► TEB 3 SPP	50	0.05
► TEB 4 SPP	504	0.63
► TEB 5 SPP	500	0.63 (target for 2011)

**Table 5:** Present (2009) and planned (2010 in 2011) total installed capacity of the GEN Group's facilities for generating electricity from solar power – by company

GEN Group company / Production facility	Total installed capacity (in kW) – present*(2009) and planned ** (2010 and 2011)
<b>1. SEL</b>	
► Mavčiče SPP*	
► Medvode 1 SPP*	207.6*
► Vrhovo 1 SPP*	
► Medvode 2 SPP**	
► Vrhovo 2 SPP**	385**
<b>2. TEB</b>	
► TEB 1 SPP*	38.1*
► TEB 2 SPP**	
► TEB 3 SPP**	
► TEB 4 SPP**	1,136**
► TEB 5 SPP**	

**Tabela 3:** Obstojeca proizvodnja električne energije v skupini GEN iz sončne energije (leto 2009)

Družba v skupini GEN/ Ime proizvodnega objekta	Inštalirana moč (kW)	Skupna proizvodnja v 2009 (v GWh)
<b>1. SEL</b>		
► MFE Mavčiče	71,4	
► MFE Medvode 1	58,8	0,23
► MFE Vrhovo 1	77,4	
<b>2. TEB</b>		
► MFE TEB 1	38,1	0,04

**Tabela 4:** Načrtovana proizvodnja električne energije v skupini GEN iz sončne energije (leto 2010 in 2011)

Družba v skupini GEN/ Ime proizvodnega objekta	Inštalirana moč (kW)	Načrtovana proizvodnja v 2010 oz. *2011 (v GWh)
<b>1. SEL</b>		
► MFE Medvode 2	30	0,03
► MFE Vrhovo 2	355	0,37
<b>2. TEB</b>		
► MFE TEB 2	82	0,08
► MFE TEB 3	50	0,05
► MFE TEB 4	504	0,63
► MFE TEB 5	500	0,63 (načrtovano v 2011)

**Tabela 5:** Obstojeca (2009) in načrtovana (2010 in 2011) skupna inštalirana moč objektov skupine GEN za proizvodnjo električne energije iz sončne energije – pregled po družbah

Družba v skupini GEN/ Ime proizvodnega objekta	Skupaj inštalirana moč (v kW) – obstojeca*(2009) in načrtovana** (2010 in 2011)
<b>1. SEL</b>	
► MFE Mavčiče*	
► MFE Medvode 1*	207,6*
► MFE Vrhovo 1*	
► MFE Medvode 2**	
► MFE Vrhovo 2**	385**
<b>2. TEB</b>	
► MFE TEB 1*	38,1*
► MFE TEB 2**	
► MFE TEB 3**	
► MFE TEB 4**	1.136**
► MFE TEB 5**	



#### **Solar power – TEB's plans for 2010:**

- ▶ Small-scale photovoltaic power plants TEB 2 (on top of the roof over a car park, nominal power: 82 kW) and TEB 3 (on the roof of the GPO 2 industrial facility, where gas turbines PB 4 and PB 5 are installed; nominal power: 50 kW),
- ▶ A free-standing solar power plant – solar park TEB 4 SPP: Obtaining a building permit, contractor selection, and beginning of construction (nominal power: 504 kW),
- ▶ A free-standing solar power plant – solar park TEB 5 SPP (located just outside the TEB perimeter; nominal power: approx. 500 kW), purchase of land, construction scheduled to begin in 2011.

#### **Solar power – SEL's activities and plans for 2009 and 2010: Vrhovo 2 SPP**

In 2009, SEL carried on with the construction of solar power plants in accordance with the company's set course and strategy for generating electricity from renewable energy. Activities have been undertaken for the construction of a new solar power plant at Vrhovo HPP called Vrhovo 2 SPP (a 77.4 kW solar power plant has been in service on the roof of the Vrhovo HPP engine room since January 2008).

On the right bank of the Vrhovo HPP reservoir, on the power plant's energy dam, there is a stretch of land in the total length of around 460 metres suitable for setting up a 355 kW solar power plant and hooking it up to a 20 kV power distribution grid. Because this solar power plant is going to stand on its own (not attached to a building), a design for obtaining a construction permit must be prepared in addition to other project documents, and a building permit obtained. The construction of this solar power plant is scheduled to begin in 2010.

SEL is also looking closely at various tendering procedures and initiatives calling for construction or investment in solar power plants installed on the roofs of schools and other buildings.

#### **Sončna energija – načrti TEB za 2010:**

- ▶ MFE TEB 2 (na strehi avtomobilske nadstrešnice, nazivna moč: 82 kW) in MFE TEB 3 (na strehi industrijskega objekta GPO 2, kjer sta nameščeni plinski turbini PB 4 in PB 5; nazivna moč: 50 kW),
- ▶ prosto stojeca sončna elektrarna – solarni park MFE TEB 4: pridobitev gradbenega dovoljenja in izbor izvajalca ter pričetek gradnje (nazivna moč: 504 kW),
- ▶ prosto stojeca sončna elektrarna – solarni park MFE TEB 5 (na površinah zunaj ograje TE Brestanica; nazivna moč: približno 500 kW): odkup zemljišč, izgradnja predvidoma v 2011.

#### **Sončna energija – aktivnosti in načrti SEL v 2009 in 2010: MFE Vrhovo 2**

V Savskih elektrarnah Ljubljana d.o.o. so v letu 2009 nadaljevali z gradnjo sončnih elektrarn v skladu z zastavljenimi smernicami družbe in strategijo pridobivanja električne energije iz obnovljivih virov. Pričeli so z aktivnostmi za gradnjo nove sončne elektrarne v HE Vrhovo, ki so jo poimenovali MFE Vrhovo 2 (na strehi strojnice HE Vrhovo namreč že od januarja 2008 obratuje sončna elektrarna moči 77,4 kW).

Na desnem bregu akumulacije HE Vrhovo na energetskem nasipu elektrarne je v skupni dolžini približno 460 metrov možna postavitev sončne elektrarne moči 355 kW in njena vključitev v 20kV distribucijsko omrežje. Ker bo ta sončna elektrarna postavljena na prostem (in ne na objektu), je poleg ostale projektnje dokumentacije potrebna tudi izdelava PGD in pridobitev gradbenega dovoljenja. Izgradnja te sončne elektrarne je predvidena v letu 2010.

Poleg tega v SEL intenzivno proučujejo različne razpise in pobude za gradnjo ali investitorstvo sončnih elektrarn na stehah šol in drugih objektov.

## 2.4 Working to promote nuclear power

One of the GEN Group's focal strategic development projects is JEK 2: the construction of a second unit of Krško Nuclear Power Plant. The project has the potential to play a crucial part in closing, or rather narrowing, the energy gap in Slovenia, increasing the reliability of electricity supply and safeguarding the environment by reducing CO<sub>2</sub> emissions, and preserving plant and animal diversity and natural areas. What is more, by stabilizing the price of electricity in the country the project will also have strong positive effects on the Slovenian economy.

Nuclear power plays a central role in Slovenia's electricity supply, with nearly 40 percent of Slovenia's total electricity production (before the Republic of Croatia gets its share) coming from the nuclear power plant (NEK). This makes for two-thirds of Slovenia's total electricity output generated with zero CO<sub>2</sub> emissions.

The key benefits of generating electricity in a nuclear power plant are a reliable and safe electricity supply and the securing of long-term stable and competitive prices of generated electricity. Of course, efforts to safeguard the environment (climate and spatial aspects, that is, preserving natural areas) also make a significant contribution to recognizing the potentials of nuclear power for answering the energy challenges that lie ahead. In addition, the planning of the construction of the second unit of Krško Nuclear Power Plant (JEK 2) is also necessitated by rising electricity consumption expected in the long term, ageing existing energy production facilities – both of which result in an alarming energy gap in the coming decades – and the trend to reduce Slovenia's dependence on imported energy.

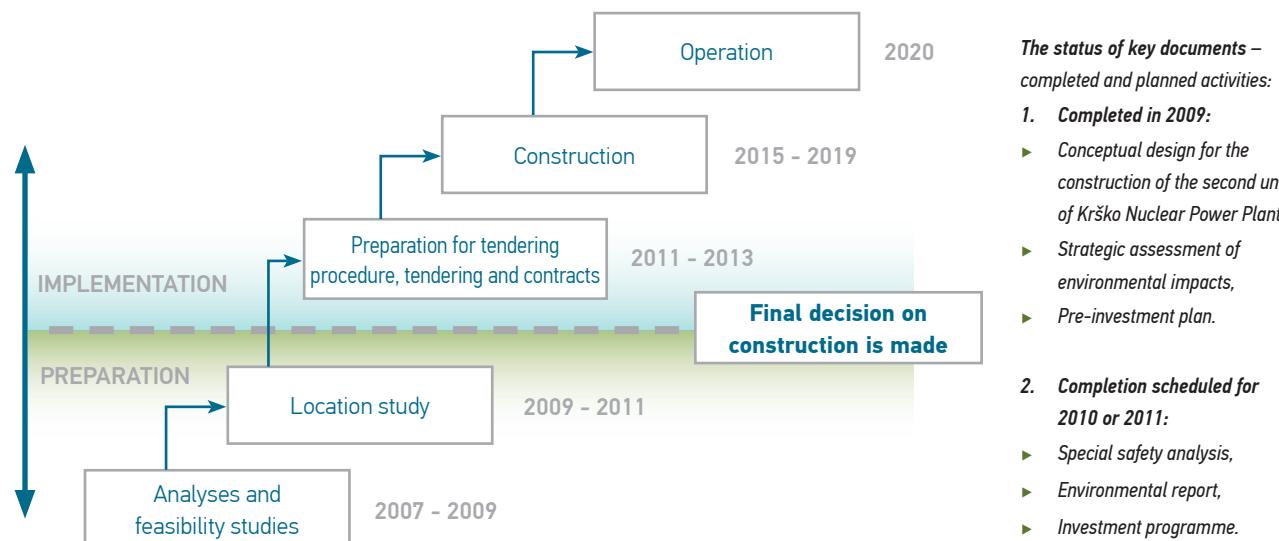
Feasibility studies into the construction of the second unit of Krško Nuclear Power Plant (JEK 2) were completed in 2009, which found that the project is highly efficient both in environmental and economic terms. The decision to go through with the construction will be followed by the so-called preparatory stage (see Timeline of the JEK 2 project), which includes:

- ▶ obtaining the energy licence,
- ▶ finding the right geographic location,
- ▶ preparing tender specifications, and
- ▶ negotiating the terms and signing an agreement on construction, which, based on experience from abroad, would take five years.

The main, operating stage would include 60 years of commercial operation of the nuclear power plant's new unit.

What is especially encouraging about the JEK 2 project is that a spatial plan for the construction of a low- and intermediate-level radioactive waste (LILW) repository has been approved and adopted in 2009. After having spent many long years looking for the right location for the LILW repository, this is an important step towards meeting all the preconditions for safe long-term operation of the existing nuclear power plant, and at the same time it allows us to be optimistic about the construction of the new nuclear power plant unit. The GEN Group, specifically its company NEK, has been actively involved in the process of finding the right location for the LILW repository from start to finish, both in providing technical bases and in the discussions and decision-making processes in the context of the Krško local partnership, which was established between the Agency for Radwaste Management and the Krško municipality with its residents.

**Figure 4:** Timeline of the JEK 2 project



## 2.4 Zavzemamo se za krepitev rabe jedrske energije

Eden osrednjih strateških razvojnih projektov skupine GEN je JEK 2: izgradnja drugega bloka jedrske elektrarne v Krškem. To je projekt, ki lahko ključno ugodno vpliva na zapiranje oziroma zmanjševanje energetske vrzeli v Sloveniji, na povečanje zanesljivosti oskrbe z električno energijo in hkrati na ohranjanje okolja z zmanjšanjem količine izpustov CO<sub>2</sub> in z ohranjanjem rastlinske in živalske raznolikosti ter naravnih površin. Poleg tega pa ima s stabilizacijo cene električne energije tudi močne pozitivne učinke na slovensko gospodarstvo.

Jedrska energija je pomemben steber oskrbe z električno energijo v Sloveniji, saj je okrog 40 odstotkov celotne slovenske proizvodnje električne energije (pred oddajo deleža Republiki Hrvaški) proizvedene v jedrski elektrarni (NEK). To sta kar dve tretjini vse električne energije, proizvedene v Sloveniji brez izpustov CO<sub>2</sub>.

Ključni prednosti proizvodnje električne energije v jedrski elektrarni sta zanesljiva in varna oskrba z električno energijo ter zagotavljanje dolgoročno stabilne in konkurenčne cene proizvedene elektrike. Seveda pa tudi prizadevanja za ohranjanje okolja (tako podnebni kot prostorski vidiki, tj. ohranjanje naravnih površin) pomembno prispevajo k prepoznavanju potencialov jedrske energije za reševanje energetskih izzivov prihodnosti. Poleg tega načrtovanje izgradnje drugega bloka jedrske elektrarne v Krškem (JEK 2) narekujejo tudi dolgoročno pričakovana rast porabe električne energije, visoka starost obstoječih energetskih objektov, posledica katerih je zaskrbljujoča energetska vrzel v prihodnjih desetletjih, in težnja po zmanjšanju energetske uvozne odvisnosti Slovenije.

V skupini GEN smo v letu 2009 zaključili s študijami upravičenosti postavitev drugega bloka jedrske elektrarne Krško (JEK 2), ki so utemeljile visoko okoljsko in ekonomsko učinkovitost projekta. Po sprejeti odločitvi za gradnjo bo v nadaljevanju sledila tako imenovana pripravljalna faza (glej časovni načrt projekta JEK 2), ki zajema:

- ▶ pridobitev energetskega dovoljenja,
- ▶ umeščanje v prostor,
- ▶ izdelavo specifikacij za ponudbe ter
- ▶ pogajanja in podpis pogodbe za gradnjo, ki bi po izkušnjah iz tujine trajala okoli pet let.

Glavna, tako imenovana obratovalna faza pa obsega 60 let komercialnega obratovanja nove enote jedrske elektrarne.

V zvezi s projektom JEK 2 je še posebej spodbudno, da je bil v letu 2009 sprejet tudi prostorski načrt za izgradnjo odlagališča nizko in srednje radioaktivnih odpadkov. Po dolgih letih iskanja lokacije za omenjeno odlagališče pomeni to pomemben korak k zagotavljanju vseh predpogojev za dolgoročno obratovanje obstoječe jedrske elektrarne, obenem pa vpliva optimizem tudi za razmišljaj o novem bloku jedrske elektrarne. Skupina GEN oziroma njena družba NEK je v celotnem projektu umeščanja odlagališča NSRAO aktivno sodelovala, tako pri zagotavljanju strokovnih podlag kot v razpravah in soodločevalskih postopkih v okviru lokalnega partnerstva Krško, ki je bilo vzpostavljeno med Agencijo za radioaktivne odpadke ter Občino Krško in njenimi prebivalkami in prebivalci.

**Slika 4:** Časovni načrt projekta JEK 2



As the GEN Group sees it, the JEK 2 project will provide the following key benefits for Slovenia:

- ▶ a long-term safe and reliable supply of electricity without CO<sub>2</sub> emissions,
- ▶ competitive, predictable and stable electricity prices,
- ▶ positive effects on the nation's economic development and standard of living.

The JEK 2 project will make a substantial contribution to the sustainable development of Slovenia.

**Figure 5:** JEK 2 model - East location



Slovenia has a several-decade-long record of expertise and excellent experience with pressurized water reactor (PWR) power plants, which can both be put to good use during the construction of the new nuclear power plant unit. Synergies with the existing nuclear power plant (NEK) can only further enhance the positive effects of the first and the second unit. The planned second unit (JEK 2) would come with an installed capacity of up to 1600 MW and would have a generation III reactor. Compared to generation II reactors, which are being used now, the next-generation reactors are technically more advanced and economically more efficient. Once the final decision has been made to go ahead with the project, we will continue to work on the project's investment programme and financial structure, making the necessary preparations for the tendering procedure, preparing contracts for contractors, and getting ready for the construction.

## 2.5 Promoting energy efficiency

We know full well that energy efficiency is crucial in reaching the strategic goals of the European (and Slovenia's) energy policy. This is why we have taken up an active role in spreading information, educating, and raising awareness with the purpose of promoting efficient use of energy among various focus groups, mostly students and consumers of electricity. The aim of promoting energy efficiency is to transform bad (environmentally irresponsible or energy wasteful) habits into positive, responsible behavioural patterns. We are confident that by being environmentally aware and by using new technologies we can improve our living conditions and give our share to energy efficiency without having to compromise our comfort or to give up any activities.

*The young and energy efficiency: The Energy-Efficient School project*

After it was launched in the 2008/09 school year, in this school year, 2009/10, we are carrying on with the long-term, nationwide Energy-Efficient School project, whose purpose is to promote energy efficiency among primary and secondary school students. Focusing on raising awareness and addressing the young generation, this is one of the important activities in the area of fulfilling our responsibility to society

V skupini GEN prepoznavamo naslednje ključne prednosti projekta JEK 2 za Slovenijo:

- ▶ dolgoročno varno in zanesljivo oskrbo z električno energijo brez izpustov CO<sub>2</sub>,
- ▶ konkurenčno, napovedljivo in stabilno ceno elektrike,
- ▶ pozitivne učinke na gospodarski razvoj in življenjski standard.

Projekt JEK 2 predstavlja pomemben prispevek k trajnostnemu razvoju Slovenije.

**Slika 5:** model JEK 2 - Zahodna lokacija



Pri gradnji novega bloka jedrske elektrarne lahko Slovenija uporabi večdesetletna znanja in odlične izkušnje s tlačnovodnimi elektrarnami. Sinergije z obstoječo jedrsko elektrarno (NEK) lahko še okrepijo pozitivne učinke tako prve kot druge enote. Načrtovani drugi blok (JEK 2) bi imel instalirano moč do 1600 MW, uvrščal pa bi se med reaktorje tretje generacije. Ti so v primerjavi s trenutno obratujejočo drugo generacijo reaktorjev tehnično še bolj dovršeni in ekonomsko učinkovitejši. V primeru jasne odločitve za projekt bomo nadaljevali z izdelavo investicijskega programa in finančne konstrukcije, pripravo razpisa in pogodb za izvajalska dela ter pripravljalnimi aktivnostmi za gradnjo.

## 2.5 Spodbujamo k učinkoviti rabi energije

Zavedamo se, da je energetska učinkovitost bistvena za doseganje strateških ciljev evropske (in s tem slovenske) energetske politike. Zato aktivno delujemo na področju obveščanja, izobraževanja in ozaveščanja, katerih namen je spodbujati učinkovito rabi energije (URE) med različnimi ciljnimi skupinami, predvsem pa šolajočimi se otroki in mladino ter končnimi odjemalci električne energije. Cilj spodbujanja učinkovite rabe energije (URE) je, da slabe (to je okoljsko oziroma energetsko neodgovorne) razvade spremenimo v pozitivne, odgovorne vedenjske vzorce. Prepričani smo, da lahko z okoljsko ozaveščenim vedenjem in novimi tehnologijami izboljšamo svoje življenske pogoje in prispevamo k URE, ne da bi se morali hkrati odreči udobju ali opustiti določene aktivnosti.

Mladi in URE: projekt EVŠ

V šolskem letu 2008/09 smo zato zagnali, v letu 2009/10 pa nadaljujemo z izvajanjem dolgoročnega nacionalnega projekta Energetsko varčna šola (EVŠ), v okviru katerega spodbujamo učinkovito rabi energije med šolajočimi se otroki in mladino. To je ena pomembnih aktivnosti na področju uresničevanja naše odgovornosti do družbe in okolja, katere poudarek je na ozaveščanju in vključevanju mladih.

and the environment. We are fully aware that only responsible and environment-conscious young people will be able to pursue and drive future development of Slovenia and the wider area in a sustainable way. Forty educational institutions (primary and secondary schools, school centres, and halls of residence) participated in the project in the 2008/09 school year, 21 of which managed to reduce energy consumption compared to the previous year thanks to various educational, awareness-raising and organizational measures that have been put in place, saving a total of 224,000 kWh of electricity.

All participating schools that managed to save more than 1,000 kWh of electricity were given financial incentives. For more information on the Energy-Efficient School project, visit the project website: [www.gen-evs.si](http://www.gen-evs.si).

## Promoting energy efficiency among consumers

GEN-I, the company for trading and sales of electricity in the GEN Group, provides a variety of services and products whose aim is to promote responsible and efficient use of energy among end users of electricity. A brief overview of some of the key measures is given below:

1. GEN-I performs individual assessments and analyses of consumption diagrams on a regular basis for all consumers whose annual consumption exceeds 2 GWh of electricity (these account for nearly 90% of the GEN-I portfolio). Together with consumers they then take a closer look at the planned consumption levels and, based on findings, our analytical division draws up suggestions and recommendations for reducing costs.
2. Consumers of electricity can work with the GEN-I analytical division to assess the costs associated with their projects from the perspective of expected electricity costs. GEN-I then develops a customized electricity offtake plan to optimize expected overall costs.
3. GEN-I has developed a product intended for large industrial customers who are in a position to adjust the offtake rates of large power consumers. This way the end user has the ability to decide, based on intra-day price movements in the market, to decrease or increase the consumption rate according to expected price fluctuations. This is also a strong financial incentive towards making sure large power consumers are run when the load on the power grid is less severe and the prices are lower as a result.
4. All GEN-I customers get to use for free an advanced web application called Terminal, which was developed in-house. With Terminal, consumers can track their past consumption, keep an eye on the associated costs and look at the expected consumption rates for the periods ahead. This enables them to make a responsible decision about introducing any special measures.



The key energy-efficiency measures that have been promoted by the Energy-Efficient School project among Slovenia's educational institutions are:

**Measures connected with major maintenance:**

- replacement of an electrical hot-water boiler with a heat pump,
- replacement of incandescent light bulbs with energy-saving bulbs,
- replacement of common light switches with switches regulating fewer lights (for example, at the gym),
- preventing water circulation when unnecessary,
- replacement of old, power-hungry appliances with new and more efficient ones (for example, the kitchen stove),
- timer-regulated and reconditioned pumps in the heating systems (used to run almost all the time, now only if necessary),
- installation of timer switches to turn off lights in individual areas,
- identification of power-hungry electrical devices that do not serve any sensible purpose (for example, a 70W TV signal amplifier that has never been in use.).

**Measures connected with education and changing habits:**

- raising awareness among the young about the use of energy and the aim to significantly reduce power consumption,
- turning off lights after school,
- turning off unneeded lights in classrooms,
- switching computers to power-saving modes (energy-efficiency scheme),
- disconnecting electrical devices from the outlet after use (no standby),
- efficient use of hot water,
- active involvement of all employees,
- monthly overview of power consumption compared to the previous year, informing all employees about the progress made, and looking for new possibilities to reduce consumption.

Zavedamo se namreč, da bodo lahko le odgovorni in ozaveščeni mladi v prihodnje gradili in nadgrajevati razvoj Slovenije in širšega okolja po trajnostni poti. V šolskem letu 2008/09 je v projektu sodelovalo 40 slovenskih izobraževalnih ustanov (osnovnih in srednjih šol, šolskih centrov in dijaških domov), od tega je 21-im uspelo z različnimi izobraževalno-ozaveščevalnimi in organizacijskimi ukrepi zmanjšati porabo električne energije v primerjavi s preteklim letom, skupaj za 224.000 kWh.

Vsem sodelujočim šolam, ki so uspele prihraniti več kot 1.000 kWh električne energije, smo razdelili denarne spodbude. Več informacij o projektu EVŠ je na voljo na spletnem mestu projekta: [www.gen-evs.si](http://www.gen-evs.si).

## Spodbujanje končnih odjemalcev k URE

Družba GEN-I, ki se v skupini GEN ukvarja s trgovanjem in prodajo električne energije, zagotavlja različne storitve in produkte, katerih namen je spodbujanje k odgovornemu, učinkovitemu upravljanju rabe energije pri končnih uporabnikih. V nadaljevanju povzemo nekaj ključnih ukrepov:

1. Pri vseh odjemalcih, ki na letni ravni porabijo več kot 2 GWh električne energije (ti predstavljajo skoraj 90 odstotkov portfelja GEN-I), GEN-I redno opravlja individualne obravnave in analize diagrama odjema. Skupaj z odjemalci nato predebatirajo načrtovane obremenitve ter na podlagi ugotovitev v analitski službi GEN-I pripravijo predloge in priporočila za znižanje stroškov.
2. Končnim odjemalcem električne energije zagotavljajo možnost, da z analitsko službo GEN-I ovrednotijo stroške svojih potencialnih projektov z zornega kota predvidenih stroškov za električno energijo. Pripravijo načrt prilagojene dinamike odjema, ki optimizira predvidene skupne stroške.
3. V GEN-I so razvili produkt, namenjen velikim industrijskim podjetjem, ki imajo možnost prilagoditve odjema večjih porabnikov električne energije. Tako se končni odjemalec na podlagi dnevnih cenovnih impulzov s trga odloča o zmanjšanju ali povečanju porabe v skladu s predvidenim cenovnim gibanjem. To pomeni močan finančni impulz v smeri porazdeljevanja porabe velikih odjemalcev v termine, ko je omrežje manj obremenjeno in so cene posledično nižje.
4. Vsi odjemalci podjetja GEN-I imajo brezplačno možnost uporabe napredne spletne aplikacije, ki so jo razvili v GEN-I in se imenuje Terminal. S pomočjo Terminala lahko odjemalci ažurno nadzirajo svojo preteklo porabo, pregledujejo s tem povezane stroške ter pregledajo tudi predvideno porabo za prihodnja obdobja. Tako se lahko odgovorno odločajo o morebitnih ukrepih.



Ključni ukrepi za učinkovito rabo energije, ki smo jih s projektom EVŠ spodbudili v slovenskih izobraževalnih ustanovah, so:

**Ukrepi, povezani z investicijskim vzdrževanjem:**

- menjava električnega grelca za toplo vodo s topotno črpalko,
- zamenjava žarnic z varčnimi sijalkami,
- menjava skupnih stikal s stikali, na katera je vezano manjše število luči (npr. v telovadnicah),
- preprečevanje cirkulacije vode v času, ko to ni potrebno,
- menjava potratnih starejših aparatov z novimi in bolj učinkovitimi (npr. štedilnik v kuhinji),
- časovna regulacija in obnovitev črpalk v ogrevalnih sistemih (pred tem so delovale skoraj nenehno, sedaj le po potrebi),
- namestitev časovnih stikal za izklop razsvetljave na določenih mestih,
- iskanje potratnih porabnikov električne energije, ki nimajo smiselnne funkcije (npr. 70W ojačevalnik, ki ni bil nikoli v uporabi).

**Ukrepi, povezani z izobraževanjem in spremembom vedenjskih navad:**

- ozaveščanje otrok o rabi energije in cilju, da bistveno zmanjšamo rabo električne energije,
- ugašanje luči na hodnikih, ko ni pouka,
- ugašanje luči v razredu, takoj ko to dopuščajo razmere,
- nastavitev varčne rabe računalnikov med delovanjem (varčna energijska shema),
- popoln izklop električnih naprav po uporabi (niso v stanju pripravljenosti),
- varčna raba tople vode,
- sodelovanje vseh zaposlenih v akciji,
- mesečno vodenje porabe v primerjavi s porabo preteklega leta in informiranje vseh zaposlenih o napredku ter hkratno iskanje novih možnosti.

## 2.6 Aware of the importance of having knowledgeable employees

*In order to fulfil our vision we need knowledgeable, committed and responsible people. Of the nearly 1000 employees in the GEN Group, almost one-half hold a higher-education or university degree. We seek to constantly upgrade and refresh the knowledge of our employees, notably through professional courses and in-house training.*

*We are aware that our people, with their knowledge, experience, dependability, and sense of responsibility and commitment, play a key part in achieving good business results and ensuring the fulfilment of ambitious development plans of the entire Group. In addition to making sure that our employees gain and broaden their knowledge and that they receive ongoing technological training to improve their skill level, we also seek to align these two aspects with the employees' responsibility to society and the environment in which they operate.*

*Together with all the companies in the Group we will continue to strategically plan the development of our employees, closely following the development of the GEN Group and the challenges it brings. The human resources policy will focus more strongly than ever on aligning and optimizing recruitment of new people across the entire Group. The Group's rapid growth and increase in the number of subsidiaries calls for recruitment of new people, with the right education and qualifications, especially in view of our strategic development projects such as the construction of the new nuclear power plant unit and the promotion of renewable energy sources.*

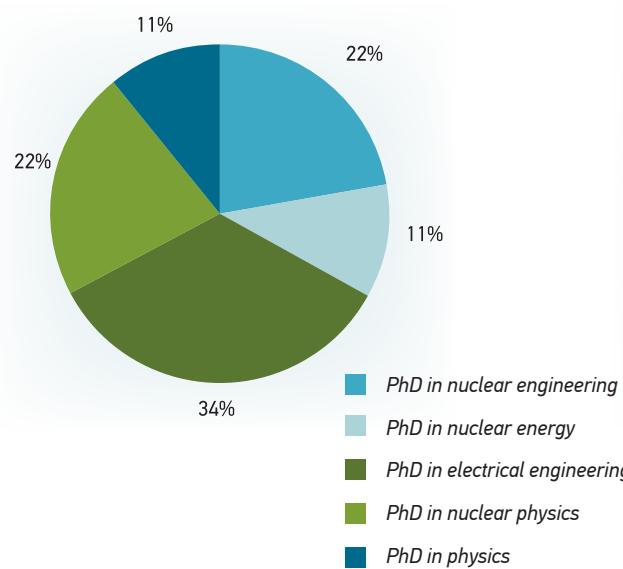
**Table 6:** Number of employees in the GEN Group (by company and by level of education):

Company	Level of education									TOTAL	
	1	2	3	4	5	6/I	6/II	7	8/I	8/II	
GEN	0	0	0	0	2	7	3	20	0	3	35
GEN-I	0	0	0	0	14	0	13	38	6	2	73
NEK	5	9	5	46	268	71	39	163	14	4	624
SEL	7	0	1	26	40	22	3	19	1	0	119
TEB	1	4	0	28	54	15	17	20	1	0	140
HESS	0	0	0	0	0	0	0	0	0	0	0
<b>TOTAL</b>	<b>13</b>	<b>13</b>	<b>6</b>	<b>100</b>	<b>378</b>	<b>115</b>	<b>75</b>	<b>260</b>	<b>22</b>	<b>9</b>	<b>991</b>

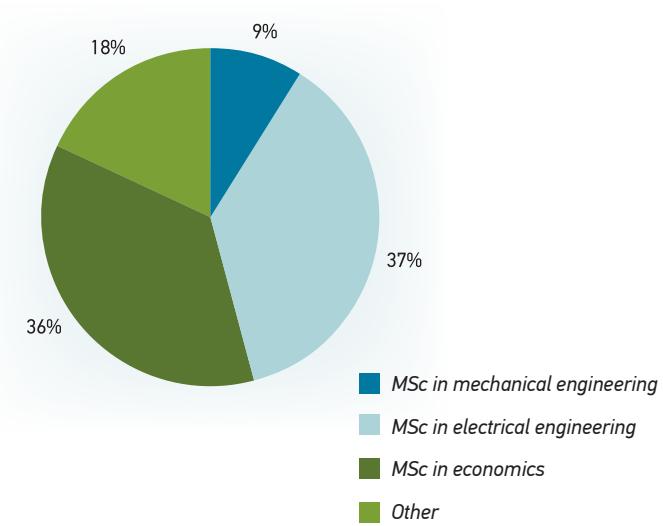
*Level 6/I (vocational), Level 6/II (higher ed. and BA/BSc based on the Bologna sys.), Level 7 (BA/BSc and MA/MSc based on the Bologna sys.), Level 8/I (MA/MSc), Level 8/II (PhD)*

GEN Group employees with technical degrees – levels 7 and 8

**Figure 6:** Level of education: Doctor of Science (8/II)



**Figure 7:** Level of education: Master of Science (8/I)



## 2.6 Zavedamo se pomena znanja zaposlenih

Za uresničevanje naše vizije potrebujemo ljudi z znanjem, ki so hkrati predani in odgovorni. Od nekaj manj kot tisoč zaposlenih v skupini GEN jih ima skoraj polovica višješolsko ali univerzitetno izobrazbo. Prizadevamo si nenehno dopolnjevati in osveževati znanje zaposlenih, s poudarkom na strokovnem izobraževanju in notranjem usposabljanju.

Zavedamo se, da so naši ljudje s svojim znanjem, izkušnjami, odgovornostjo, zanesljivostjo in predanostjo ključni razlog za dosedanje uspešnost in prihodnjo ambicioznost razvojnih načrtov celotne skupine. Poleg pridobivanja in osveževanja strokovnih znanj in nenehnega izboljševanja tehnološke usposobljenosti zaposlenih pa si prizadevamo tudi za njuno usklajevanje z odgovornostjo zaposlenih do družbe in okolja, v katerem delujejo.

Tudi v prihodnje bomo skupaj z vsemi družbami v skupini strateško načrtovali razvoj zaposlenih, ki bo sledil razvoju skupine GEN in izzivom, ki jih ta ustvarja. Kadrovska politika bo tako v prihodnje še intenzivneje kot doslej temeljila na usklajevanju in optimirjanju zaposlovanja na ravni celotne skupine. Hitra rast skupine in širitev kroga njenih hčerinskih družb terja dodatno zaposlovanje, še posebej pa bodo nove zaposlitve ustrezno izobraženih in usposobljenih kadrov potrebne zaradi načrtovanih strateških razvojnih projektov, kot sta izgradnja drugega bloka jedrske elektrarne in spodbujanje rabe obnovljivih virov energije.

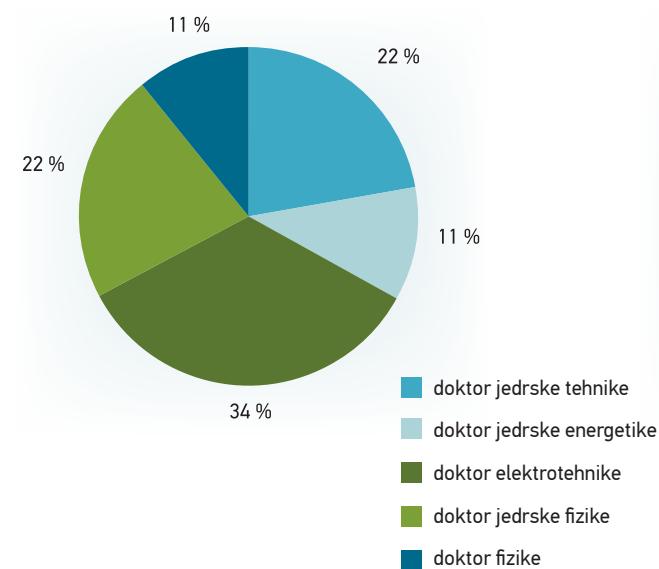
**Tabela 6:** Število zaposlenih v skupini GEN (pregled po družbah in po izobrazbi):

Družba	Raven izobrazbe									SKUPAJ	
	1.	2.	3.	4.	5.	6/I.	6/II.	7.	8/I.	8/II.	
GEN	0	0	0	0	2	7	3	20	0	3	35
GEN-I	0	0	0	0	14	0	13	38	6	2	73
NEK	5	9	5	46	268	71	39	163	14	4	624
SEL	7	0	1	26	40	22	3	19	1	0	119
TEB	1	4	0	28	54	15	17	20	1	0	140
HESS	0	0	0	0	0	0	0	0	0	0	0
<b>SKUPAJ</b>	<b>13</b>	<b>13</b>	<b>6</b>	<b>100</b>	<b>378</b>	<b>115</b>	<b>75</b>	<b>260</b>	<b>22</b>	<b>9</b>	<b>991</b>

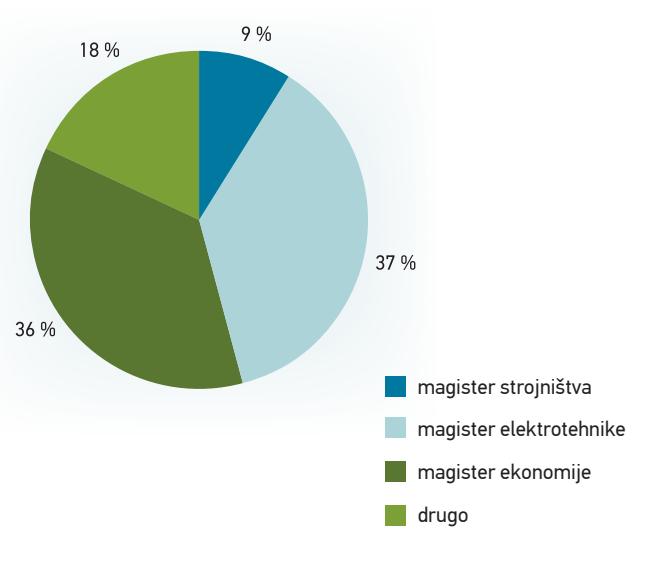
6/I. raven (višja), 6/II. raven (VS in UNI po bolonj. prog.), 7. raven (UNI in MAG po bolon. prog.), 8/I. raven (MAG), 8/II. raven (DR)

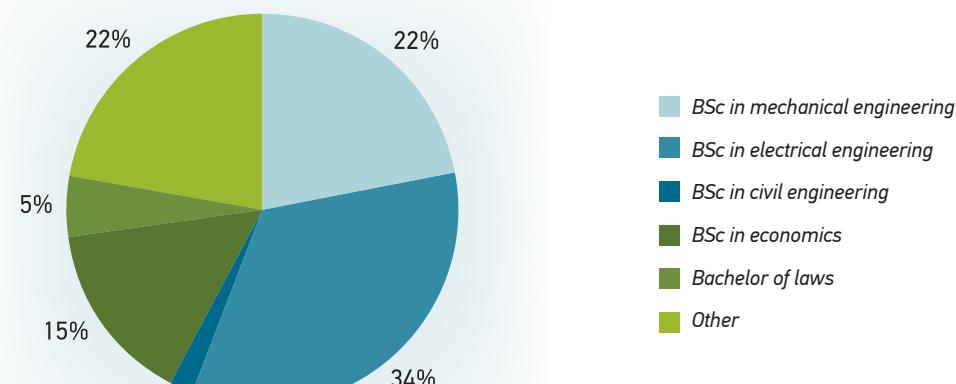
Strokovna področja izobrazbe zaposlenih v skupini GEN – pregled za 7. in 8. stopnjo izobrazbe

**Slika 6:** Stopnja izobrazbe: doktorji/doktorice znanosti (8/II)



**Slika 7:** Stopnja izobrazbe: magistri/magistrice znanosti (8/I)



**Figure 8: Level of education: Bachelor's degree (7/I)**

The GEN Group employs 260 people holding a bachelor's degree (level 7/I).

Based on our need for human resources, the GEN Group has a well-planned scholarship policy in place, providing company scholarships at the national level and under the regional Posavje Scholarship Scheme. To learn more about our present and future plans concerning scholarships for secondary-school and higher-education students of relevant study programmes, see Chapter 2.7 "Carefully planned development of our future workforce".

## 2.7 Carefully planned development of our future workforce

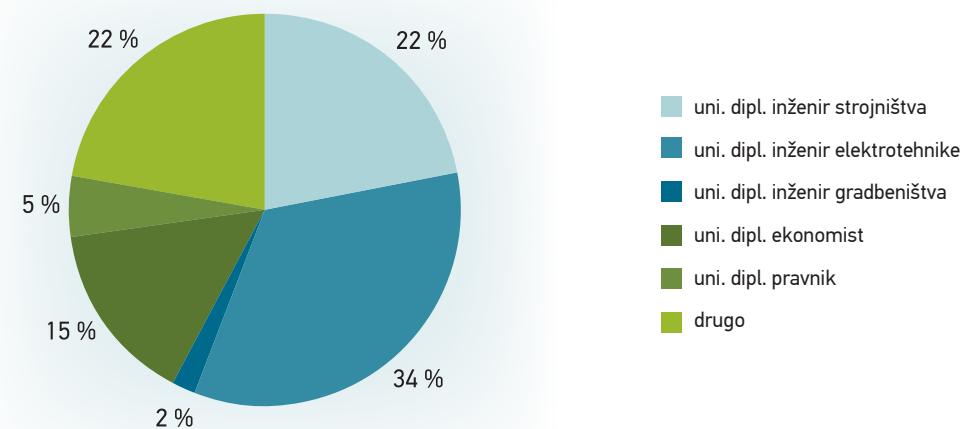
*Due to their ambitious character and focus on development, the companies in the GEN Group are constantly faced with the need for new, highly educated and skilled people with specialist knowledge. This is why we make carefully planned investments in the development and recruitment of human resources from various spheres of knowledge, notably natural and technical sciences. In 2009, under our own company scholarship programme (nationwide) and under the Posavje Scholarship Scheme (region-wide), we awarded scholarships to 83 secondary school and university students enrolled in relevant study programmes.*

*Because of the age structure of our employees and the need for new, highly educated and qualified people, human resource planning is becoming one of the management's main challenges in the coming short- and medium term. This is particularly true in view of the GEN Group's focal strategic energy projects such as the planned construction of the second unit of the nuclear power plant and the promotion of renewable energy sources. Knowing this full well, we at the GEN Group wish to proactively and in an interesting way present to today's secondary school and university students, the working population of tomorrow, the future employment needs and possibilities and to encourage them to opt for various types of promising professions in the energy industry.*

*We strive for strategic development and recruitment of human resources chiefly from the following areas:*

- physics,
- electrical engineering,
- computer and information science,
- mechanical engineering,
- civil engineering, and
- mathematics.

*The GEN Group provides company scholarships at the national level through its companies and at the regional level under the Posavje Scholarship Scheme. Scholarships under this scheme are awarded to secondary school and university students studying for professions*

**Slika 8: Stopnja izobrazbe: univerzitetni diplomanti/diplomantke (7/I)**

V skupini GEN je zaposlenih 260 delavcev, ki imajo 7/I. stopnjo izobrazbe.

Skladno s kadrovskimi potrebami v skupini GEN načrtujemo in izvajamo tudi našo politiko štipendiranja, tako prek kadrovskih štipendij na nacionalni ravni kot prek regijske Posavske štipendijske sheme. Več o obstoječih in prihodnjih načrtih na področju štipendiranja dijakov in študentov ustreznih strokovnih smeri lahko preberete v poglavju 2.7 »Premišljeno razvijamo bodoče kadre«.

## 2.7 Premišljeno razvijamo bodoče kadre

V družbah skupine GEN se zaradi ambiciozne razvojne naravnosti nenehno srečujemo s potrebo po novih, visoko izobraženih in usposobljenih kadrih s specialističnimi znanji. Zato načrtovano vlagamo v razvoj in pridobivanje kadrov z različnih, predvsem naravoslovno-tehniških področij. V letu 2009 smo prek lastnega sistema kadrovskih štipendij (na nacionalni ravni) in prek Posavske štipendijske sheme (na regionalni ravni) štipendirali 83 dijakov in študentov ustreznih študijskih področij.

Tako zaradi starostne strukture obstoječih zaposlenih kot zaradi potreb po novih, visoko izobraženih in usposobljenih kadrih postaja kadrovsko načrtovanje eden temeljnih upravljavskih izzivov v prihodnjem kratko- in srednjeročnem obdobju. To velja še posebej v luči uresničevanja zastavljenih osrednjih strateških energetskih projektov skupine GEN, kot sta načrtovana izgradnja drugega bloka jedrske elektrarne in spodbujanje rabe obnovljivih virov energije.

Ker se v skupini GEN tega zavedamo, želimo današnjim dijakom in študentom, prihodnji aktivni populaciji, proaktivno in na zanimiv način predstaviti potrebe in možnosti za zaposlitev ter jih spodbuditi k odločanju za različne vrste perspektivnih poklicev v energetiki.

Prizadevamo si za načrtovan razvoj in pridobivanje kadrov predvsem z naslednjih strokovnih področij:

- fizika,
- elektrotehnika,
- računalništvo in informatika,
- strojništvo,
- gradbeništvo in
- matematika.

Skupina GEN prek svojih druž podeljuje kadrovske štipendije na nacionalni ravni, poleg tega pa na regionalni ravni štipendiramo tudi prek Posavske štipendijske sheme. Štipendije prek te sheme dodeljujemo dijakom in študentom, ki se šolajo za ustrezne poklice skladno

that are consistent with the needs of the companies in the GEN Group. As a future employer, we directly provide 30 percent of scholarship funds under the scheme, the rest is covered by the local community and the government, depending on the amount of available public funds and the priority development needs and job prospects in the development region of Posavje.

**Table 7:** Number of scholarships in GEN Group companies at 31/12/2009

Company	No. of scholarships at 31/12/2009
GEN	30
GEN-I	1
NEK	34
SEL	9
TEB	9
HESS	0
<b>TOTAL</b>	<b>83</b>

#### The GEN Group's scholarship plans:

The GEN Group companies provided company scholarships worth EUR 46,140 in 2009 under its own scholarship programme and EUR 11,560 under the Posavje Scholarship Scheme – that's a total of more than EUR 57,000. The first graduates receiving our scholarship will be looking for jobs in 2012, which will significantly impact our human resources plans in the coming years. According to plans, the scope of scholarship funds in 2010 will remain on the same level as in 2009, at least. The requirements of our scholarship strategy concerning fields of knowledge will depend on the progress of our strategic development projects, particularly in the field of promoting nuclear energy (the JEK 2 project) and renewable energy sources (hydro and solar power).

s potrebami družb v skupini GEN. Kot bodoči delodajalec za štipendije v shemi neposredno zagotavljamo 30 odstotkov sredstev, ostalo pa zagotovita lokalna skupnost in država, glede na obseg razpoložljivih javnih sredstev ter glede na prednostne razvojne potrebe in perspektivne poklice v posavski razvojni regiji.

**Tabela 7:** Število štipendistov po družbah skupine GEN na dan 31. 12. 2009

Družba	Število štipendistov 31.12.2009
GEN	30
GEN-I	1
NEK	34
SEL	9
TEB	9
HESS	0
<b>SKUPAJ</b>	<b>83</b>

#### Načrti skupine GEN na področju štipendiranja:

Prve diplomantke in diplomanti iz kroga naših štipendirancev bodo iskali zaposlitev v letu 2012, kar bo pomembno vplivalo na naše kadrovske načrte v naslednjih letih.

V letu 2010 načrtujemo štipendiranje vsaj v enakem obsegu kot v letu 2009. Poudarki naše strategije štipendiranja glede strokovnih področij pa bodo odvisni od razvoja naših strateških razvojnih projektov, predvsem na področju krepitve rabe jedrske energije (projekt JEK 2) in obnovljivih virov energije (vodna in sončna energija).



#### Human-resource challenges presented by the JEK 2 project:

According to international analyses, investors in nuclear facilities comparable to the planned second unit of Krško Nuclear Power Plant (JEK 2) employ up to 300 people during construction; counting in all subcontractors, a project of this scope typically involves 2,500 to 3,000 people. During its operation, the new nuclear power plant unit is expected to employ 400 to 500 people, plus around 1,000 permanent and temporary subcontractors.



#### Kadrovske izzivi projekta JEK 2:

Mednarodne analize kažejo, da investitorji primerljivih jedrskih objektov, kot je načrtovani drugi blok JEDRSKE elektrarne Krško (JEK 2), v času gradnje zaposlujejo do 300 ljudi, skupaj z vsemi podizvajalci pa tak projekt pomeni delo za od 2.500 do 3.000 ljudi. V času obratovanja bi načrtovani nov jedrski objekt zaposloval predvidoma med 400 in 500 ljudi, stalnih in občasnih podizvajalcev pa bi bilo okoli 1000.

## 2.8 Seeking to ensure a better understanding of energy-related topics

**Knowledge and awareness of energy, the energy industry and energy-related issues are key to a proper understanding of energy programmes, plans and strategic energy investments, all of which substantially affect the lives of every citizen. By promoting and backing events and projects aiming to raise and broaden the knowledge of energy and the energy industry, we at the GEN Group add our share to ensuring a better understanding of the energy sphere around Slovenia.**

The energy industry and the future energy challenges are in the public spotlight in Slovenia and around the world. It is only individuals with a good general knowledge and sense of awareness of the fundamentals of energy, the energy industry and its role in various spheres of life, and of energy projects and underlying dilemmas who can constructively and responsibly take part in various types of discussions and decision-making processes concerning our energy future.

Unfortunately, Slovenian and European opinion polls show that the knowledge and awareness of energy sources, the ways they are harnessed, electricity-generation technologies, and so on, is on a very low level. The knowledge of Slovenians is limited chiefly to being

## 2.8 Prizadevamo si za boljše razumevanje energetskih tem

Znanje in ozaveščenost o energiji, energetiki in energetskih vprašanjih so ključnega pomena za razumevanje energetskih programov, načrtov ter strateških energetskih investicij, ki pomembno vplivajo na življenja državljanov in državljanov. V skupini GEN s spodbujanjem in podpiranjem dogodkov in projektov za povečevanje in širjenje znanja o energiji in energetiki prispevamo k boljšemu razumevanju energetskih vprašanj v Sloveniji.

Energetika in izzivi energetske prihodnosti so ključne javne teme tako v Sloveniji kot v svetu. Le posamezniki, ki so celovito obveščeni in ozaveščeni o osnovah energije, energetike in njenega pomena za posamezne sfere življenja ter o energetskih projektih in dilemah, ki se pri tem pojavljajo, se lahko tvorno in odgovorno vključujejo v različne vrste razprav in soodločevalskih postopkov glede naše energetske prihodnosti.

Ugotovitve slovenskih in evropskih javnomenjskih raziskav žal kažejo, da je stopnja znanja in ozaveščenosti o virih energije, načinih njihove uporabe, tehnologijah za proizvodnjo električne energije itd. prenizka. Znanje Slovencev ostaja večinoma na ravni poznavanja splošnih energetskih konceptov, šibko pa je poznavanje načinov proizvodnje električne energije, ukrepov energetske učinkovitosti, realnega pomena in dometa obnovljivih virov energije (OVE) ter ključnih dilem energetske prihodnosti naše države.

familiar with the general energy-related concepts, but when it comes to the ways electricity is generated, the energy-efficiency measures, the true meaning and scope of renewable energy sources (RES), and the main dilemmas our country is facing regarding its energy future, their knowledge is rather poor.

The GEN Group is therefore committed to promoting and supporting organization and execution of events and projects aiming to improve energy literacy, addressing different groups of stakeholders, from school children and students to experts, businesses, NGOs and the media. We are convinced that only a knowledgeable, well-informed nation with a true sense of awareness can make responsible and sustainable decisions about its energy future.

**Table 8:** Some of the events and projects we promoted and backed in 2009

Event	Focus group	More information
EnRe: International conference Energy Technology and Climate Change	Energy-industry experts	<a href="http://www.enre.si">www.enre.si</a>
The 2009 Young Energy Expert Contest	Students of natural and technical sciences	<a href="http://www.gen-energija.si">www.gen-energija.si</a>
The 5th FUTURE OF ENERGY conference	Energy-industry experts	<a href="http://www.irt3000.si">www.irt3000.si</a>
Conference: Nuclear Energy for New Europe 2009	Energy-industry experts, businesses	<a href="http://www.djs.si/port2009">www.djs.si/port2009</a>
A conference on renewable energy sources and energy efficiency	Experts and representatives of institutions and businesses	<a href="http://www.energije.si">www.energije.si</a>
International project: A workshop on the FEED-IN System and harnessing renewable energy sources	Energy-industry experts	<a href="http://www.feed-in-cooperation.org">www.feed-in-cooperation.org</a>
ECO quiz	Secondary school students	<a href="http://ers.scv.si">ers.scv.si</a>



Energy literacy is an individual's general knowledge and awareness of energy sources, how energy is generated and where it is used, and how energy can be used responsibly, that is, efficiently. It is up to an individual's level of energy literacy to what extent he or she uses energy sources responsibly, what his or her attitude towards different energy sources (renewable sources, nuclear power, fossil fuels, and so on) will be, and what positions he or she will take regarding future energy challenges, for instance, regarding the development or expansion of various methods of generating electricity (nuclear power plants, fossil fuel power plants, photovoltaics, wind power plants, and other).

To promote the knowledge and understanding of energy-related topics, our plan for the future is to:

- ▶ Establish an information centre on energy and the energy industry in Krško,
- ▶ Continue to provide strategic support to projects that promote an expert-based understanding of the future energy challenges,
- ▶ Establish a sustainable development consultative body that will help steer the GEN Group's planning and fulfilment of activities and reporting on achievements in the context of sustainable development.

V skupini GEN zato spodbujamo in podpiramo organizacijo in izvedbo dogodkov oziroma projektov za izboljševanje t. i. energetske pismenosti, namenjenih različnim skupinam deležnikov, od šolajočih se otrok in mladine do strokovne in poslovne javnosti, nevladnih organizacij in medijev. Prepričani smo, da lahko le celovito izobražen, uravnoteženo obveščen in realistično ozaveščen narod dolgoročno odgovorno in trajnostno odloča o svoji energetski prihodnosti.

**Tabela 8:** Nekaj dogodkov in projektov, ki smo jih spodbudili oziroma podprli v letu 2009

Dogodek	Ciljna javnost	Več informacij najdete na naslovu:
EnRe: Mednarodna konferenca Energetika in klimatske spremembe	Strokovnjaki s področja energetike	<a href="http://www.enre.si">www.enre.si</a>
Natečaj mladih energetikov 2009	Študenti naravoslovnih in tehniških ved	<a href="http://www.gen-energija.si">www.gen-energija.si</a>
5. Konferenca PRIHODNOST ENERGIJE	Strokovnjaki s področja energetike	<a href="http://www.irt3000.si">www.irt3000.si</a>
Konferenca: Nuclear Energy for New Europe 2009	Strokovnjaki s področja energetike, poslovna javnost	<a href="http://www.djs.si/port2009">www.djs.si/port2009</a>
Konferenca obnovljivi viri energije in učinkovita raba energije	Strokovna javnost in predstavniki institucij ter podjetij	<a href="http://www.energije.si">www.energije.si</a>
Mednarodni projekt: Delavnica FEED-IN sistem in področje izrabe obnovljivih virov	Strokovnjaki s področja energetike	<a href="http://www.feed-in-cooperation.org">www.feed-in-cooperation.org</a>
EKO kviz	Dijaki in dijakinja	<a href="http://ers.scv.si">ers.scv.si</a>



Energetska pismenost (angleško »energy literacy«) pomeni posameznikovo obveščenost in ozaveščenost o virih energije, načinu pridobivanja in vrstah rabe energije ter znanje o odgovorni, tj. učinkoviti rabi energije. Od stopnje razvitosti energetske pismenosti posameznika je odvisno, v kolikšni meri bo pri rabi virov energije ravnal odgovorno, kakšen bo njegov odnos do različnih virov energije (obnovljivi viri, jedrska energija, fosilna goriva itd.) ter kakšna stališča bo zavzel do izzivov energetske prihodnosti, na primer razvoja ali širitev različnih oblik proizvodnje električne energije (jedrske elektrarne, termoelektrarne na fosilna goriva, fotovoltaika, vetrne elektrarne itd.).

Na področju povečevanja stopnje razumevanja energetskih tem v prihodnje načrtujemo:

- ▶ vzpostavitev informacijskega središča o energiji in energetiki in Krškem,
- ▶ nadaljevanje strateške podpore projektom, ki spodbujajo strokovno utemeljeno razumevanje izzivov energetske prihodnosti,
- ▶ vzpostavitev posvetovalnega telesa za trajnostni razvoj, ki bo skupino GEN usmerjal pri načrtovanju in izvajanjju aktivnosti ter poročanju o dosežkih na področju trajnostnega razvoja.

## 2.9 Active cooperation with the local communities

The GEN Group, with its energy-generating facilities and its other companies, is closely integrated into the national environment, as well as individual local and regional environments in which it operates and on which it has an impact of some sort. This integration forms the fundamental framework for planning and fulfilling the Group's corporate responsibility to society, which is, among others, evident from the Group's sponsorship and donation strategy, which mainly focuses on these areas:

- ▶ sport,
- ▶ culture,
- ▶ education,
- ▶ environmental protection.

Also in 2009 the GEN Group followed this strategy by backing a number of projects consistent with our values and mission. Roughly one-half of the funds were given to the local and regional environments in which the GEN Group companies operate, while the remaining part was allocated to societies and organizations around Slovenia.

We are pleased to find that the individuals and societies backed by the GEN Group record good results. In the future we will continue to promote and support those subject areas and activities that are, one, consistent with the substance and operation of the GEN Group and, two, have the potential to yield outstanding results for individual regions or the whole country or even the wider area.

**Figure 9:** Our world champion Primož Kozmus



GEN energija as his main sponsor helped hammer thrower Primož Kozmus reach his ambitious goals that he and his team had set after capturing a silver medal in the World Championships in Osaka in 2007. In 2008 Kozmus came home with a gold medal from the Olympic Games in Beijing. And in 2009, in the World Championships in Berlin, Kozmus reached the apex of his career by taking the World Championship title.

Last but not least, the Group's importance at the local and the regional level is reflected in the development potential that its energy companies provide to the environments to which they are intricately bound. These companies, as it were, employ a significant number of predominantly highly qualified people in job positions with a high value added. The companies are an important driving force behind regional development and indirectly drive the development and growth of many interconnected areas as well, from the services sector, social and educational activities, to art and culture.

## 2.9 Aktivno sodelujemo z lokalnimi skupnostmi

Skupina GEN je s svojimi energetskimi objekti in tudi drugimi svojimi družbami močno vpeta tako v nacionalno okolje kot v posamezna lokalna in regionalna okolja, v katerih deluje in nanje s svojim delovanjem na različne načine vpliva. Ta vpetost je temeljni okvir načrtovanja in uresničevanja odgovornosti do družbe, ki jo med drugim izkazujemo skozi svojo strategijo sponzorstev in donacij, in sicer predvsem na področjih:

- ▶ športa,
- ▶ kulture,
- ▶ izobraževanja,
- ▶ varstva okolja.

Tudi v letu 2009 smo skladno z zastavljenou strategijo sredstva namenili izbranim projektom glede na njihovo skladnost z vrednotami in poslanstvom naše skupine. Približno polovico sredstev smo namenili lokalnim oziroma regionalnim okoljem, v katerih delujejo družbe skupine GEN, drugo polovico pa društvtom oziroma organizacijam po vsej Sloveniji.

Z zadovoljstvom ugotavljamo, da posamezniki in društva, katerih delovanje podpira skupina GEN, dosegajo dobre rezultate. Tako si bomo tudi v prihodnje prizadevali za spodbujanje in podporo tistih vsebin in aktivnosti, ki so po eni strani skladne z vsebino in načinom delovanja skupine GEN, po drugi strani pa lahko prinašajo pomembne kakovostne presežke za posamezne regije ali na ravni celotne Slovenije in širše.

**Slika 9:** Naš in svetovni prvak Primož Kozmus



GEN energija je kot generalni sponzor metalca kladiva Primoža Kozmusa pomagala doseči visoko zastavljene cilje, ki si jih je Primož s svojo ekipo zadal po srebrni medalji na svetovnem prvenstvu leta 2007 v Osaki. Že leta 2008 je dosegel zlato odličje na olimpijskih igrah v Pekingu. V letu 2009 pa je na svetovnem prvenstvu v Berlinu dosegel svoj najodmevnnejši rezultat: naslov svetovnega prvaka.

Nenazadnje pa se pomen skupine na lokalni in regionalni ravni kaže v razvojnem potencialu, ki ga energetske družbe nudijo okoljem, v katera so vpete. Te družbe namreč zaposlujejo pomembno število večinoma visokokvalificiranih delovnih mest z visoko dodano vrednostjo. Tako predstavljajo pomembno gonilno silo regionalnega razvoja in posredno omogočajo razvoj in razcvet mnogih povezanih področij, od storitvenih, socialnih in izobraževalnih dejavnosti do kulture in umetnosti.

Učinkovitost, varnost in okoljska sprejemljivost so ključna vodila pri naših naložbah v trajnostne in obnovljive vire energije: jedrsko, vodno in sončno energijo.

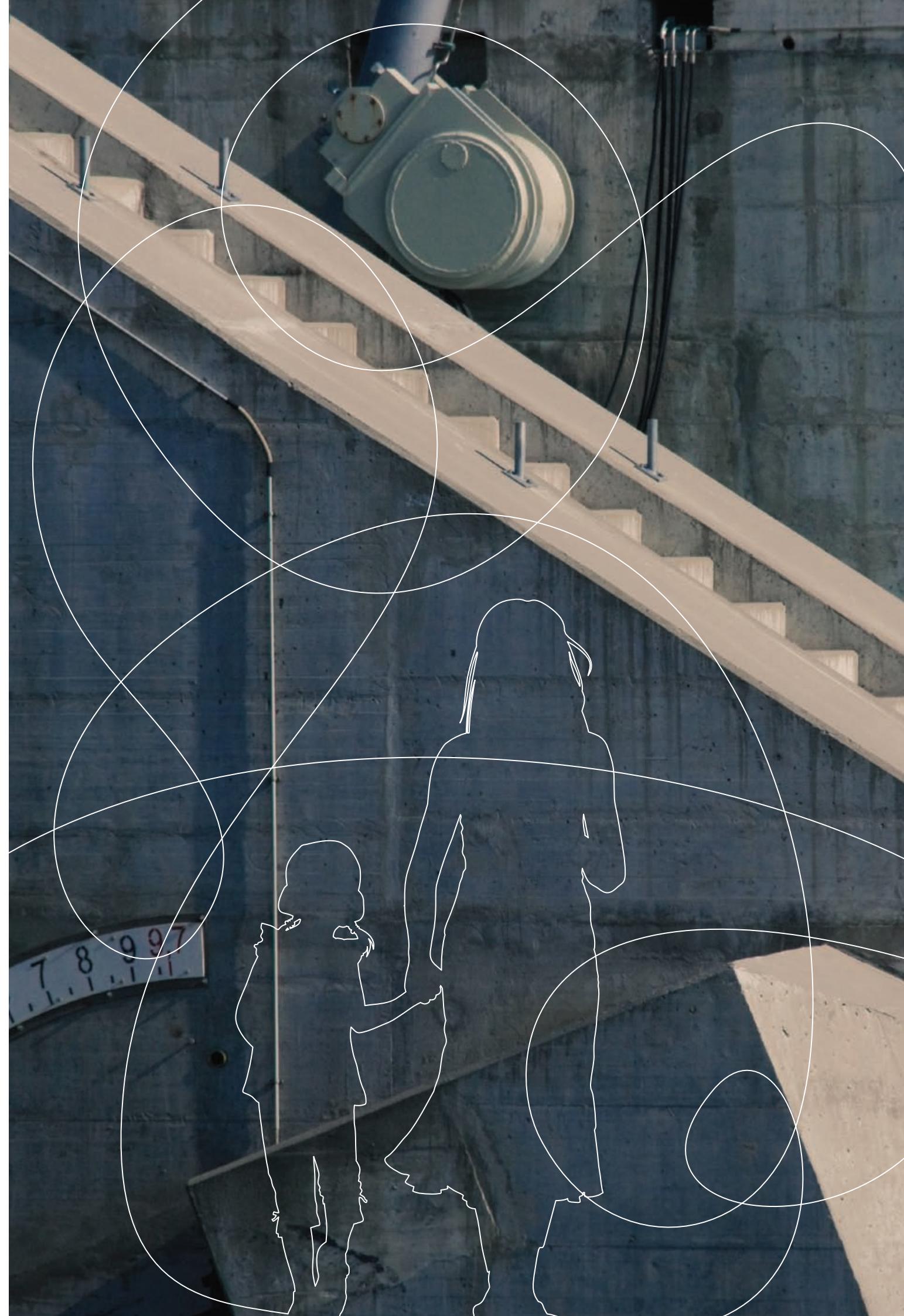
Na fotografiji: del jezovnega objekta hidroelektrarne Boštanj.

*Efficiency, safety and environmental acceptability are the keynotes of the investments we make in sustainable and renewable energy sources: nuclear, hydro and solar power.*

*Photo: Part of the Boštanj Hydroelectric Power Plant dam facility*



### 3. Ključni kazalniki učinkovitosti 3. Key performance indicators



### 3.1 The Group's business results

GEN Group	2007	2008	2009
Assets in EUR million	556.72	609.98	654.64
Equity in EUR million	430.91	470.21	521.65
Revenues in EUR million	199.04	280.11	299.8
EBIT in EUR million	42.53	64.98	66.84
EBITDA in EUR million	70	96.13	97.38
Net profit in EUR million	33.26	51.9	57.79
Value added in EUR million	92.45	121.35	124.27
Return on equity	-	11.52%	11.65%
Electricity sold in GWh	3,882	4,229	5,185

GEN Group	2007	2008	2009
Equity financing rate	77.4%	77.09%	79.68%
Equity financing rate	90.64%	90.21%	92.84%
Operating fixed assets rate	70.69%	60.48%	56.84%
Long-term investment rate	72.25%	66.38%	63.12%
Equity to operating fixed assets	1.1	1.28	1.4
Long-term financing of fixed assets	1.24	1.33	1.44
Immediate solvency ratio – acid test ratio	1.51	1.75	3.79
Quick ratio	2.12	2.61	4.8
Current ratio	2.89	3.35	5.87
Operating efficiency ratio	1.28	1.31	1.3
Net return on equity ratio	0.08	0.12	0.12

The GEN Group's key performance indicators reveal that business was good in the period from 2007 to 2009. This period saw an increase in the Group's assets, equity, revenues, profit, and the amounts of electricity produced and sold.

The information given below is key to ensuring sustainable operation of the Group:

- The Group has minimal debt (the equity financing rate is 79.68%), which is already evident from the relatively small difference between equity and assets,
- The Group has low current assets (the long term financing rate is 92.84%),
- The Group has a high long-term investment rate (63.12%).

It is clear from the performance indicators that the company management follows the long-term strategy, in which development and stable operation are well balanced.

### 3.2 Production of electricity

Planned and actual electricity output (in GWh)	Plan 2008	Performance 2008	Ratio 2008	Plan 2009	Performance 2009	Ratio 2009	Plan 2010
NEK	2,945	2,986	1.0138*	2,700	2,730	1.011*	2,695
Large-scale HPPs	300	324	1.0827	306	356	1.164	308
Small-scale HPPs and SPPs	0.59	0.57	0.9694	0.67	0.65	0.982	0.67
TEB	100	12	0.1208	100	9	0.089	100
HESS	14	8	0.5993	32	29	0.9	39
GEN Group total	3,359	3,331	0.9917	3,138	3,117	0.9934	3,142

\* The ratio for NEK (2008 and 2009) is calculated based on the proportion of the 2009 performance to the 2009 plan (50%)

### 3.1 Poslovna uspešnost skupine

Skupina GEN	2007	2008	2009
Sredstva v mio EUR	556,72	609,98	654,64
Kapital v mio EUR	430,91	470,21	521,65
Prihodki v mio EUR	199,04	280,11	299,8
EBIT v mio EUR	42,53	64,98	66,84
EBITDA v mio EUR	70	96,13	97,38
Čisti dobiček v mio EUR	33,26	51,9	57,79
Dodana vrednost v mio EUR	92,45	121,35	124,27
Čista donosnost kapitala	-	11,52 %	11,65 %
Prodana električna energija v GWh	3,882	4,229	5,185

Skupina GEN	2007	2008	2009
Stopnja lastniškosti financiranja	77,4 %	77,09 %	79,68 %
Stopnja dolgoročnosti financiranja	90,64 %	90,21 %	92,84 %
Stopnja osnovnosti investiranja	70,69 %	60,48 %	56,84 %
Stopnja dolgoročnosti investiranja	72,25 %	66,38 %	63,12 %
Koeficient kapitalske pokritosti osnovnih sredstev	1,1	1,28	1,4
Koeficient dolgoročne pokritosti dolgoročnih sredstev	1,24	1,33	1,44
Koeficient neposredne pokritosti krat. obv. (hitri koeficient)	1,51	1,75	3,79
Koeficient pospešene pokritosti krat. obv. (pospešeni koeficient)	2,12	2,61	4,8
Koeficient kratkoročne pokritosti krat. obv. (kratkoročni koeficient)	2,89	3,35	5,87
Koeficient gospodarnosti poslovanja	1,28	1,31	1,3
Koeficient čiste dobičnosnosti kapitala	0,08	0,12	0,12

Ključni kazalniki poslovanja skupine GEN kažejo, da je bilo poslovanje v obdobju od leta 2007 do 2009 uspešno. V tem obdobju je prišlo do povečanja sredstev, kapitala, prihodkov, dobička in količine proizvedene ter prodane energije.

Za trajnostno delovanje skupine so ključni naslednji podatki:

- skupina je minimalno zadolžena (stopnja lastniškosti financiranja je 79,68 %), na nizko zadolženosti kaže tudi relativno majhna razlika med kapitalom in sredstvi,
- skupina ima malo kratkoročnih sredstev (stopnja dolgoročnosti financiranja je 92,84 %),
- visoka stopnja dolgoročnosti investiranja (63,12 %).

Iz poslovnih kazalnikov je razvidno, da vodstvo družbe deluje skladno z dolgoročno strategijo, v kateri sta uravnotežena razvoj in stabilno delovanje.

### 3.2 Proizvodnja električne energije

Načrt in proizvodnja električne energije (v GWh)	načrt 2008	realizacija 2008	doseg 2008	načrt 2009	realizacija 2009	doseg 2009	načrt 2010
NEK	2.945	2.986	1.0138*	2.700	2.730	1.011*	2.695
Velike HE	300	324	1.0827	306	356	1.164	308
MHE in MFE	0,59	0,57	0,9694	0,67	0,65	0,982	0,67
TEB	100	12	0,1208	100	9	0,089	100
HESS	14	8	0,5993	32	29	0,9	39
Celotna skupina GEN	3.359	3.331	0,9917	3.138	3.117	0,9934	3.142

\* Doseg NEK (2008 in 2009) je izračunan na podlagi razmerja med načrtom 2009 (50 %) in realizacijo 2009

Electricity output in GWh	2006	2007	2008	2009	target for 2010
GEN Group	2,645	3,053	3,331	3,117	3,142

*Electricity output went up consistently from 2006 to 2008, but in 2009 it was slightly down due to NEK's fuel replacement and scheduled maintenance shutdown.*

*It should be noted that the total consumption of electricity in Slovenia was down by some 10% in 2009 over the preceding years.*

### 3.3 Electricity trading and sales

*Electricity purchase and sales in the GEN Group have been on the up over the past three years.*

Electricity purchases	2007	2008	2009
GEN Group, in GWh	5,473	6,671	9,225

Electricity sales	2007	2008	2009
GEN Group, in GWh	5,473	6,671	9,225

*The purchase portfolio of the GEN Group comprises electricity generated in the Group's own production units and electricity purchased from other domestic and foreign producers and energy brokers. Nuclear energy being the predominant energy source in the portfolio, renewable sources of energy and the possibility of rendering ancillary services, tertiary frequency control in particular, also account for a significant share in the structure of the portfolio. Electricity is purchased from large producers and qualified producers, which equates to a significant contribution of the GEN Group to promoting the use of electricity generated from environmentally friendly sources. Purchases from the GEN Group's own generation units nevertheless make up a large part of the entire purchase portfolio.*

Količina proizvedene električne energije v GWh	2006	2007	2008	2009	načrt 2010
Skupina GEN	2.645	3.053	3.331	3.117	3.142

*Proizvodnja električne energije se je v obdobju od leta 2006 do leta 2008 stalno povečevala, v letu 2009 pa je bila nekoliko manjša zaradi zamenjave goriva in rednega remonta NEK.*

*Skupna poraba električne energije v Sloveniji je sicer v letu 2009 v primerjavi s predhodnimi leti padla za dobro desetino.*

### 3.3 Trgovanje in prodaja električne energije

*Nakup in prodaja električne energije sta v obdobju preteklih treh let v skupini GEN nenehno naraščala.*

Nakup električne energije	2007	2008	2009
Skupina GEN v GWh	5.473	6.671	9.225

Prodaja električne energije	2007	2008	2009
Skupina GEN v GWh	5.473	6.671	9.225

*Nakupni portfelj skupine GEN je sestavljen iz električne energije, proizvedene v lastnih proizvodnih enotah, in električne energije, odkupljene od drugih domačih in tujih proizvajalcev ter posrednikov. Med viri električne energije prevladuje jedrska, pomemben delež v strukturi pa predstavljajo tudi obnovljivi viri energije ter možnost nudenja sistemskih storitev, še posebej terciarne regulacije. Električno energijo odkupujemo od velikih proizvajalcev in kvalificiranih proizvajalcev, kar pomeni pomemben prispevek skupine GEN k spodbujanju rabe električne energije iz okolju prijaznih virov. V celotnem nakupnem portfelju predstavlja odkup iz proizvodnih enot skupine GEN še vedno velik delež.*

### 3.4 Investments in research and development

Investments by GEN Group companies	In 2008 (in EUR million)	In 2009 (in EUR million)
GEN	31.7	7.6
HESS construction project	23.6	3.8
JEK 2 construction project	0.2	0.3
GEN Information Centre construction project	-	0.8
Capital injection in GEN-I	-	2.4
Other	7.9	0.3
NEK	23.5	30.6
SEL	6.6	8
TEB	4.7	10.5
GEN-I	1.5	0.8
GEN Group	67.8	57.5

*The GEN Group's orientation towards development is reflected in the investments in technological upgrades and in research and development that were made in 2008 and 2009. The overall amount of funds set aside for development or investments in the Group was EUR 67.8 million in 2008, and EUR 57.5 million in 2009.*

Investicije družb skupine GEN	v letu 2008 (v mio EUR)	v letu 2009 (v mio EUR)
GEN	31,7	7,6
Projekt izgradnje HESS	23,6	3,8
Projekt izgradnje JEK 2	0,2	0,3
Projekt izgradnje Informacijskega središča GEN	-	0,8
Dokapitalizacija GEN-I	-	2,4
Drugo	7,9	0,3
NEK	23,5	30,6
SEL	6,6	8
TEB	4,7	10,5
GEN-I	1,5	0,8
Skupina GEN	67,8	57,5

*Razvojna naravnost skupine GEN se odraža v investicijah v tehnološko nadgradnjo ter naložbah v razvoj in raziskave v letih 2008 in 2009. Na ravni celotne skupine je bilo za razvoj oziroma investicije v letu 2008 namenjenih 67,8 milijonov EUR, v letu 2009 pa 57,5 milijonov EUR.*

The development funds went to projects promoting sustainability, primarily the construction of hydroelectric power plants on the lower Sava River (HESS), the JEK 2 construction project, and the establishment of the GEN Control Centre. In 2009 the Group also made a number of small investments important for its regular operation.

## 3.5 Employees and development of human resources

Number of employees	2007	2008	2009
GEN Group	878	919	991
<b>Educational structure of the GEN Group employees</b>			
Level 1–4	153	140	132
Level 5	345	360	378
Level 6	102	114	190
Level 7	254	280	260
Level 8/I	18	19	22
Level 8/II	6	6	9
<b>Total</b>	<b>878</b>	<b>919</b>	<b>991</b>
<b>Number of scholarships</b>			
GEN Group	47	62	83

For further details, see the following chapters in this Sustainability Report:

- ▶ Importance of having knowledgeable employees: Chapter 2.6,
- ▶ Development of future human resources: Chapter 2.7.

Razvojna sredstva so bila namenjena trajnostno naravnanim projektom, predvsem izgradnji hidroelektrarn na spodnji Savi (HESS) in projektu izgradnje JEK 2, ter vzpostavitevi Centra vodenja GEN. V letu 2009 je imela skupina tudi različne manjše investicije in naložbe, ki so pomembne za njeno redno delovanje.

## 3.5 Zaposleni in razvoj kadrov

Število zaposlenih	2007	2008	2009
Skupina GEN	878	919	991
<b>Izobrazbena struktura zaposlenih v skupini GEN</b>			
1. - 4. raven	153	140	132
5. raven	345	360	378
6. raven	102	114	190
7. raven	254	280	260
8/I. raven	18	19	22
8/II. raven	6	6	9
<b>Skupno</b>	<b>878</b>	<b>919</b>	<b>991</b>
<b>Število štipendistov</b>			
Skupina GEN	47	62	83

Za podrobnejše informacije glej naslednja poglavja trajnostnega poročila:

- ▶ o pomenu znanja zaposlenih: poglavje 2.6,
- ▶ o razvoju bodočih kadrov: poglavje 2.7.

## 4. Report's compliance with GRI guidelines

The GEN Group follows the guidelines for reporting on sustainable development, so the contents and structure of this Sustainability Report are compliant with the GRI guidelines (Global Reporting Initiative: [www.globalreporting.org](http://www.globalreporting.org)). This way we want to make sure the information and data presented in the report are as clear and transparent as possible, enabling comparison at the national and the international level.

The table below outlines which of the standard or specific GRI indicators were included, either whole or in part, in our first Sustainability Report. Or, from a different perspective: Readers interested in topics related to an individual standard or specific GRI indicator can use the table below to quickly and easily navigate to the chapter or page where the relevant GRI indicator is examined.

The drawing up of the first Sustainability Report and the systematic monitoring of the GRI guidelines have brought us new knowledge and experience. Now we clearly see where and how we can improve our future contribution to Slovenia's sustainable development, as well as our reporting on activities, achievements and, above all, plans in this field. We have set clearly defined goals how to carry out these improvements already within the next short-term period.

Chapter (item) in this report	Page in this report	Included standard GRI indicators (Standard Disclosure) <sup>7</sup>	Included specific GRI indicators (EUSS) <sup>8</sup>
1.1 Word from the Director: Energy industry and sustainable development: Why such a tight bond?	4	1.1	
1.2 Word from the Editorial Team: Reasons for the (first) sustainability report of the GEN Group	6	1.1, 3.1, 3.4	
1.3 Summary of key topics The GEN Group and sustainable development: Our positions, measures, achievements and plans	8, 10	3.5	
2.1 Our sustainable portfolio helps reduce CO <sub>2</sub> emissions	14, 16	EN16	EU2
2.2 Efficient electricity production	18, 20		EU2, EU6
2.3 Making substantial investments in renewable energy sources	20, 22, 24		EU2, EU8
2.3.1 Hydropower	20, 22, 24		EU2, EU8
2.3.2 Solar power	20, 22, 24		EU2, EU8
2.4 Working to promote nuclear power	26, 28	EN18	EU6, EU8
2.5 Promoting energy efficiency	28, 30	4.16; EN5, EN6, EN7 (indirectly – improvements on the consumer side); EN26	EU23
2.6 Aware of the importance of having knowledgeable employees	32, 34		EU14
2.7 Carefully planned development of our future workforce	34, 36	4.16	EU14
2.8 Seeking to ensure a better understanding of energy-related topics	36, 38	4.14, 4.16	
2.9 Active cooperation with the local communities	40	4.15, 4.16	
3. Key performance indicators	44, 46, 48	EC1 (item 3.1 of this report)	EU2 (item 3.2), EU8 (item 3.4), EU14 (item 3.5)
4. Report's compliance with GRI guidelines	50	3.12	
About the GEN Group	52, 54	2	

## 4. Pregled skladnosti poročila z usmeritvami GRI

V skupini GEN sledimo smernicam na področju poročanja o trajnostnem razvoju, zato smo vsebino in strukturo svojega trajnostnega poročila pripravili skladno s smernicami GRI (Global Reporting Initiative: [www.globalreporting.org](http://www.globalreporting.org)). Tako skušamo zagotoviti čim višjo stopnjo jasnosti in preglednosti posredovanih podatkov ter njihovo primerljivost tako na nacionalni kot tudi mednarodni ravni.

Iz spodnje preglednice je v grobem razvidno, katere od splošnih in posebnih kazalnikov GRI smo v svojem prvem trajnostnem poročilu bodisi delno ali v celoti obdelali. Ali, gledano z drugega zornega kota: s pomočjo spodnje preglednice lahko tiste bralci, ki jih zanimajo le vsebine, povezane s posameznimi od splošnih ali posebnih kazalnikov GRI, nemudoma najdejo poglavje oziroma stran v poročilu, kjer je iskan Kazalnik GRI obravnavan.

Priprava prvega poročila o trajnostnem razvoju nam je ob sistematičnem spremljanju smernic GRI prinesla pomembna nova znanja in izkušnje. Sedaj se jasno zavedamo, kje in kako lahko v prihodnje izboljšamo tako naš prispevek k trajnostnemu razvoju Slovenije kot tudi naše poročanje o aktivnostih in dosežkih, predvsem pa o naših načrtih na tem področju. Zastavili smo si jasne cilje, kako bomo navedene izboljšave uresničili že v naslednjem kratkoročnem obdobju.

Poglavje (točka) v trajnostnem poročilu skupine GEN	Stran v poročilu	Obravnavani splošni kazalniki GRI (Standard Disclosure) <sup>7</sup>	Obravnavani posebni kazalniki GRI (EUSS) <sup>8</sup>
1.1 Uvodnik direktorja: Energetika in trajnostni razvoj: od kod tako močna povezava?	5	1.1	
1.2 Uvodnik uredništva: Zakaj (prvo) trajnostno poročilo skupine GEN?	7	1.1, 3.1, 3.4	
1.3 Povzetek ključnih vsebin Skupina GEN in trajnostni razvoj: naša stališča, ukrepi, dosežki in načrti	9, 11		3.5
2.1 S trajnostnim portfeljem prispevamo k nižjim emisijam CO <sub>2</sub>	15, 17	EN16	EU2
2.2 Učinkovito proizvajamo električno energijo	19, 21		EU2, EU6
2.3 Intenzivno vlagamo v obnovljive vire energije	21, 23, 25		EU2, EU8
2.3.1 Vodna energija	21, 23, 25		EU2, EU8
2.3.2 Sončna energija	21, 23, 25		EU2, EU8
2.4 Zavzemamo se za krepitev rabe jedrske energije	27, 29	EN18	EU6, EU8
2.5 Spodbujamo k učinkoviti rabi energije	29, 31	4.16; EN5, EN6, EN7 (posredno – izboljšave pri odjemalcih); EN26	EU23
2.6 Zavedamo se pomena znanja zaposlenih	33, 35		EU14
2.7 Premišljeno razvijamo bodoče kadre	35, 37	4.16	EU14
2.8 Prizadevamo si za boljše razumevanje energetskih tem	37, 39	4.14, 4.16	
2.9 Aktivno sodelujemo z lokalnimi skupnostmi	41	4.15, 4.16	
3. Ključni kazalniki učinkovitosti	45, 47, 49	EC1 (v točki 3.1 trajnostnega poročila)	EU2 (v točki 3.2), EU8 (v točki 3.4), EU14 (v točki 3.5)
4. Pregled skladnosti poročila z usmeritvami GRI	51		3.12
O skupini GEN	53, 55		2

## About the GEN Group

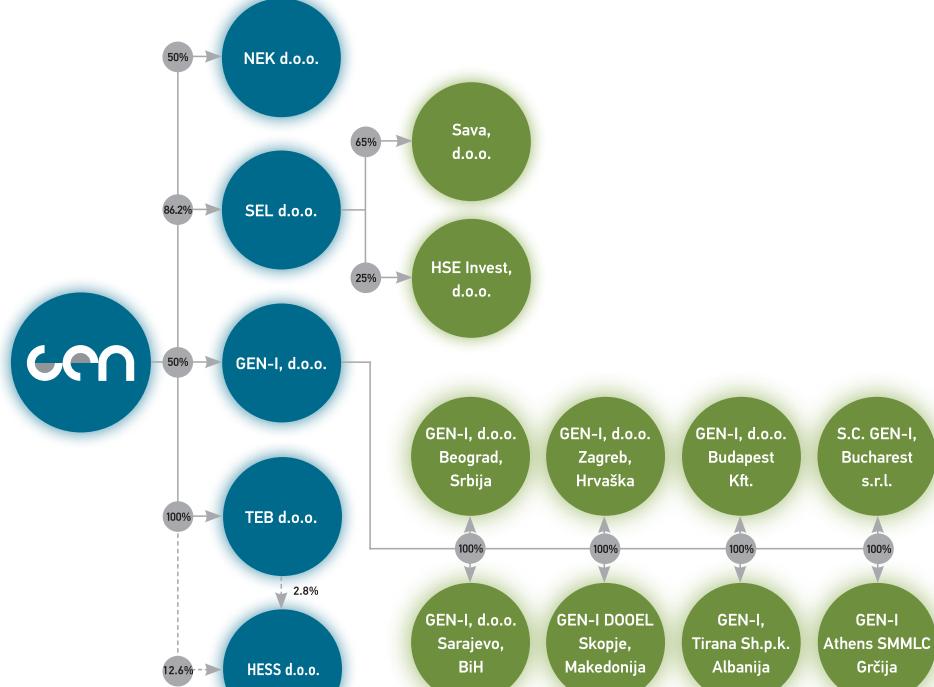
The mission shared by all the companies in the GEN Group is to provide a reliable, safe and competitive electricity supply to various groups of consumers.

The companies in the Group together produce between 5,600 and 6,300 gigawatt-hours of electricity per year. This way we meet around 30 percent of the demand for electricity in the national electric power grid.

We give consumers the power to choose. This way we add our share to increasing competitiveness in Slovenia's electricity market and to boosting competitiveness of the entire national economy.

- **We are a reliable producer of electricity.** We create synergic effects by harnessing various, mostly sustainable and zero-carbon, energy sources:
  - ▶ nuclear power,
  - ▶ hydropower, and
  - ▶ solar power.
- **We effectively market electricity.** We rely on our knowledge, professional approach and creative energy. We boast an effective array of functions for effective management of risks associated with electricity purchases, trading and sales. We enable the Group's production sources to optimally market the electricity they generate, and we provide end users with a quality, comprehensive supply of electricity and help optimize their purchase channels.
- Investments in maintenance and optimization of existing facilities and in the **development of new production facilities** are an important strategic focus of the GEN Group. This is the only way we can ensure sufficient amounts of electricity and reduce Slovenia's dependence on imported energy. Co-investing in various new energy projects presents both a challenge and an opportunity for the members of the Group.

Organizational structure of the GEN Group



## O skupini GEN

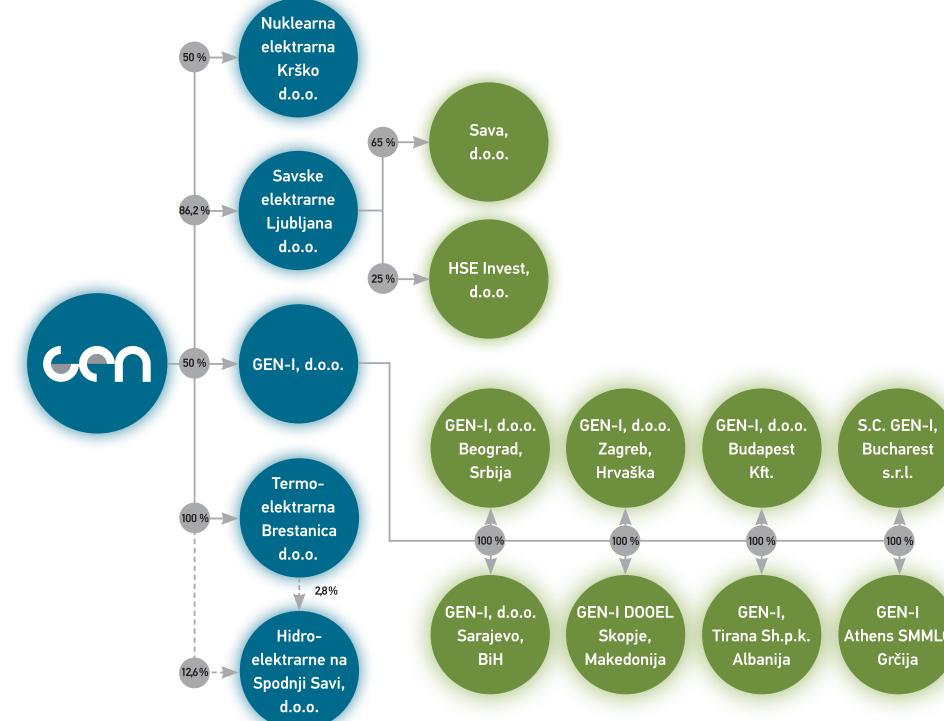
Skupna naloga podjetij, združenih v skupini GEN, je zanesljiva, varna in konkurenčna oskrba različnih skupin uporabnikov z električno energijo.

Podjetja v skupini GEN letno skupaj proizvedejo med 5.600 in 6.300 gigavatnih ur električne energije. Tako zadovoljujemo približno 30 odstotkov potreb po električni energiji v elektroenergetskem sistemu Republike Slovenije.

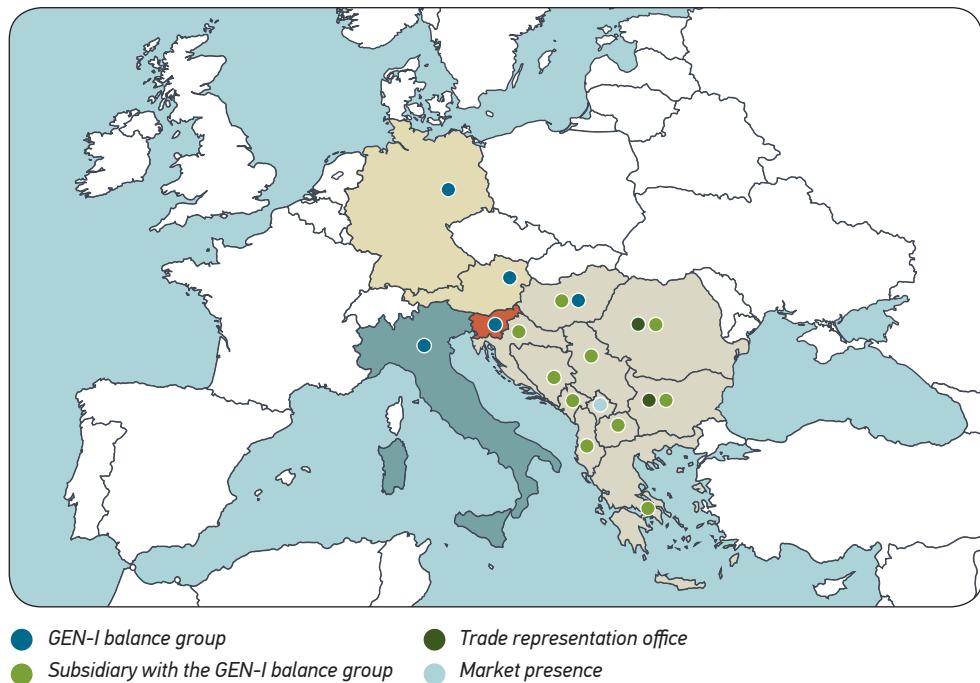
Zagotavljamo možnost izbire. Tako prispevamo k izboljšanju konkurenčnosti na slovenskem elektroenergetskem trgu in h krepiti konkurenčnosti celotnega slovenskega gospodarstva.

- **Zanesljivo proizvajamo električno energijo.** Pri tem zagotavljamo sinergijske učinke raznolikih, predvsem trajnostno naravnanih, brezgložnih virov energije:
  - ▶ jedrska energija,
  - ▶ vodna energija in
  - ▶ sončna energija.
- **Učinkovito tržimo električno energijo.** Pri tem uporabljamо znanje, profesionalen pristop in ustvarjalno energijo. Združujemo funkcije za učinkovito obvladovanje tveganj nakupa, trgovanja in prodaje električne energije. Proizvodnim virom iz skupine omogočamo optimalno trženje proizvedene energije, končnim odjemalcem pa kakovostno storitev celovite oskrbe z električno energijo in optimizacijo njihovih nabavnih poti.
- Pomembna strateška dejavnost skupine GEN so vlaganja v vzdrževanje in optimizacijo obstoječih ter **razvoj novih proizvodnih zmogljivosti**. Le tako lahko zagotavljamo zadostne količine električne energije in zmanjšujemo energetsko uvozno odvisnost Slovenije. Sovlaganje v različne nove energetske projekte je izziv in priložnost za članice naše skupine.

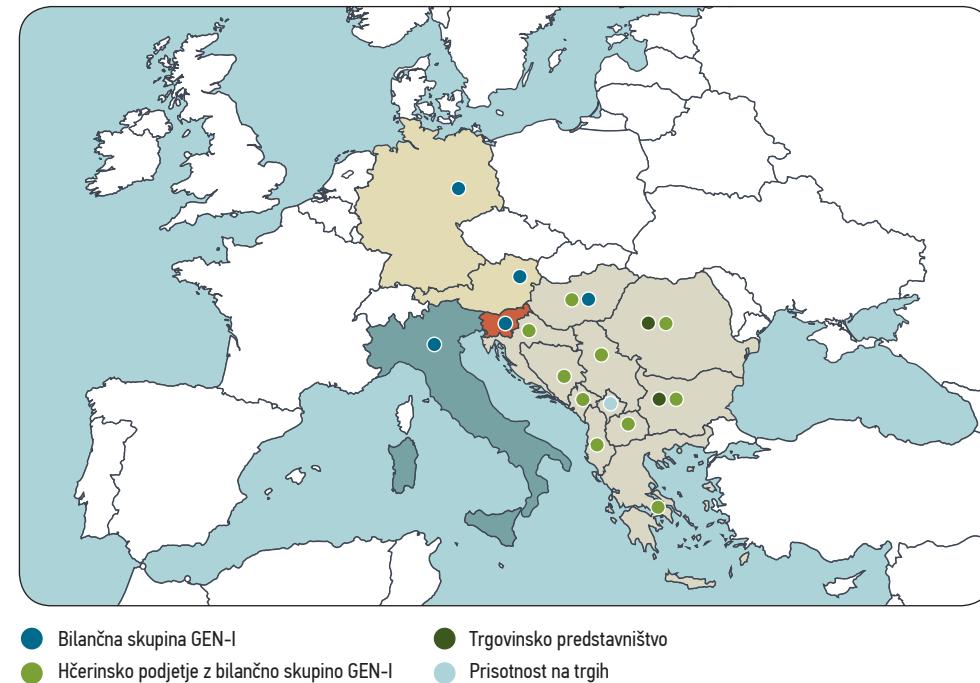
Organizacijska struktura skupine GEN



## The GEN Group on the map of Europe



## Skupina GEN na zemljevidu Evrope



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