

**MONITORING REPORT FOR 2012**

**Sreden Iskar Cascade HPP Portfolio Project  
Date 16<sup>th</sup> November, 2012, rev.1**

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## Background and Objectives of Monitoring Report

According to paragraph 36 of the JI guidelines project participants "shall submit to an accredited independent entity a report in accordance with the monitoring plan on reductions in anthropogenic emissions by sources or enhancements of anthropogenic removals by sinks that have already occurred. The report shall be made publicly available."

The objective of the present monitoring report is to provide the complete, consistent, clear, and accurate calculation of the emissions reductions, within the boundaries of the Sreden Iskar Cascade Hydro Power Plants, for the period 1<sup>st</sup> January 2012 – 31<sup>st</sup> October 2012.

## SECTION A. General Project activity information

### A.1. Title of the project:

Sreden Iskar Cascade HPP Portfolio Project, September 2006 ("The Project"), Rev.2, dated 15 October 2007.

### A.2. JI registration number:

The project reference number is 0063.

### A.3. Short description of the project activity:

The project envisages the establishment of nine Hydro Power Plants ("HPPs") on the river Iskar, about 40 km north of Sofia, with the overall objective to generate Emission Reduction Units ("ERUs"), reducing 370,970 tonnes of CO<sub>2</sub> equivalent in the period 2008 till 2012 (inclusive).

In year 2000, the Municipality of Svoghe carried out a feasibility study of the proposed HPPs. It attracted the interest of several energy companies that proposed to jointly develop the project with the city and in late 2003 the Municipality of Svoghe and Petrolvilla signed a Letter of Intent.

Based on the Memorandum of Understanding on co-operation between the Kingdom of the Netherlands and the Republic of Bulgaria in reducing emission of Greenhouse Gases ("GHGs") under article 6 of the KP, the proposed JI portfolio project aims at reducing GHGs by replacing electricity generated from fossil fuels with electricity generated from renewable hydraulic energy sources. Here below the project parties including the Carbon Credit purchaser, and the Project owner.

Party Involved	Legal entity project participant (as applicable)	Party involved wishes to be considered as project participant (Yes/No)
Bulgaria (Host Party)	Vež Svoghe AD Boulevard Cristopher Columbus, 41 1592 Sofia, Bulgaria	No
Netherlands	European Bank for Reconstruction and Development (EBRD) (on account of the Netherlands) One Exchange Square London EC2A 2JN, United Kingdom	No

**Table 1: Party involved**

Project Design Document (PDD), including baseline and monitoring plan, has been prepared by the engineering consulting company MWH S.p.A.. The Letter of Approvals (LoA) has been issued by the Ministry of the Environment of the Republic of Bulgaria on 01.08.2007 and by the designated focal point of the State of the Netherlands on 28.11.2007.

“Sreden Iskar Cascade Hydro Power Plants” project has been approved by a provisionally accredited independent entity (AIE) and has been granted final determination on 03.12.2007. PDD and Determination Report are available on the UNFCCC website under project reference number 0063.

#### **A.4. Monitoring period:**

- Monitoring period starting date: 01/01/2012;
- Monitoring period closing date: 31/10/2012<sup>1</sup>.

#### **A.5. Methodology applied to the project activity (incl. version number)**

##### **A.5.1. Baseline methodology:**

The ACM0002 “Consolidated monitoring methodology for grid-connected electricity generation from renewable sources” version 07, sectoral scope 01, 30th November, 2007 has been used to identify the baseline scenario of the proposed JI project. This methodology also refers to the “Tool for calculation of emission factor for electricity systems”.

##### **A.5.2. Monitoring methodology:**

The ACM0002 “Consolidated monitoring methodology for grid-connected electricity generation from renewable sources” version 07, sectoral scope 01, 30th November, 2007 has been used to monitor the proposed JI project.

#### **A.6. Time table for major project parts according to the PDD:**

The project will be implemented in three phases: (i) implementation of the first two HPPs; (ii) implementation of three more HPPs; and (iii) implementation of last four HPPs.

The location of the nine HPPs, the start construction dates and the dates on which the individual HPPs will become operational according to the PDD are reported in the table below.

Location	Start Construction date according to PDD rev2	Commissioning Date according to PDD rev2
Lakatnik	July 2006	January 2008
Svrazhen	July 2006	January 2008
Opletnia	July 2009	April 2010
Levishte	July 2009	April 2010
Gavrovnitsa	July 2009	April 2010
Prokopanik	May 2010	July 2011

<sup>1</sup> Both days were included. Monitoring period includes time from 00:00 01/01/12 up to 24:00 31/10/12.

Location	Start Construction date according to PDD rev2	Commissioning Date according to PDD rev2
Tzerovo	May 2010	July 2011
Bov-Sud	May 2010	July 2011
Bov-Nord	May 2010	July 2011

**Table 2: Scheduling of the Portfolio activities**

**A.7. Intended deviations or revisions to the registered PDD (2<sup>nd</sup> version):**

Since the preparation of the PDD, the project time schedule has been modified (see table 3). The latest time schedule and activities plan is quoted in the Detailed Investment Plan (DIP), a document Vez Svoghe has been requested to prepare by EBRD. The DIP, dated September 2010, follows the document "Industrial and Economic-Financial Plan in relation to the Construction of Nine Hydro-Electric Power Stations on the River Iskar in the Municipality of Svoghe in Bulgaria" prepared by Petrolvilla Group Energia e Ambiente and dated 18<sup>th</sup> May 2007.

According to this updated scheme, Phase II of the project consists of the construction of the hydropower stations of Opletnia, Tzerovo and Prokopanik, while Phase III will consist of the construction of the hydropower stations of Gavronitsa, Levishte, Bov-Sud and Bov-Nord.

For all the stations the construction works have been delayed if compared to the original plan quoted in the PDD (2<sup>nd</sup> version).

In the following table the operating hydropower stations are marked in green, including Tzerovo, which is connected to the grid since 20<sup>th</sup> April 2012. With respect to the Phase II stations Opletnia and Prokopanik are currently under construction.

Location	Start Construction date according to the actual plan	Commissioning Date according to the actual plan	Commissioning Date
Lakatnik	July 2006	June 2008	July 2008
Svrazhen	July 2006	June 2008	May 2009
Opletnia	October 2010	April 2013	Under construction
Tzerovo	May 2010	December 2012	April 2012
Prokopanik	March 2011	January 2013	Under construction
Gavrovitsa	January 2013	June 2015	-
Levishte	January 2013	June 2015	-
Bov-Sud	January 2013	June 2015	-
Bov-Nord	January 2013	June 2015	-

**Table 3: Updated scheduling of the Portfolio activities**

**A.8. Intended deviations or revisions to the registered monitoring plan (Decision 17/CP.7, Annex H, paragraph 57 to be considered):**

According to the Monitoring Plan checked and approved by DNV after the initial verification (3<sup>rd</sup> and 4<sup>th</sup> July 2008), "the electricity distributor send the read-off measurements to the engineer in charge of monitoring process who will verify the accuracy of the recorded energy data against the data recorded by SCADA System. Both values will be entered by the engineer in a special log book for that purpose on monthly basis (Annex II)". However, it must be observed that the electricity distributor does not send the read-off measurements to Vez

Svoghe. The procedure is the following: a person responsible for Vez Svoghe and a person responsible for CEZ read together the commercial electricity meter installed at Lakatnik hydro power plant, and they countersign the reading which will be the electricity generation included in the invoice issued by Vez Svoghe to the Electricity provider.

#### **A.9. Changes since last verification:**

Since the last verification, the following changes occurred:

- One Internal Audit has been performed;
- The Audit Report has been drafted.

No forward action (FAR) has been required to Vez Svoghe by DNV in 2011

#### **A.10. Person(s) responsible for the preparation and submission of the monitoring report**

The person(s) responsible for the preparation and submission of the monitoring report are:

- Vassil Shumanov, Vez Svoghe
- Dario Dilucia La Perna, Consultant MWH

### **SECTION B. SECTION B. Key monitoring activities according to the monitoring plan for the monitoring period stated in A.4.**

#### **B.1. Monitoring equipment types**

The measuring devices are implemented in accordance with the official “*Electricity Metering Rules*” and comply with the technical and metrological requirements, defined by the “*Regulation for Metering Devices*”. The devices have to undergo regular inspection and supervision under the “*Metering Law*” and the “*Regulation for Metering Devices*”.

The commercial electric energy meter, owned by the Electricity Distributor (CES), records active energy delivered to the grid (Actaris mod. SL7000, code 3X57.7/100-3x240/415V 1(10)A). The Vez Svoghe Company is not allowed to have access at the commercial electric energy meter. The commercial measuring meter is not connected to the SCADA system, and consequently is not monitored remotely. The public provider will pay close attention to the correct operation of the measurement devices and the correct measuring values.

Further to the commercial electric energy meter, a static electric energy meter is installed in each Hydro Power Plant. It records the electricity generation only for verification purpose. The values recorded by the static electric energy meter are then transferred to the SCADA system (Monitoring System) in order to report the trend of the electricity generation. The electricity generation on SCADA system is different from the electricity generation booked by the Electricity Distributor (CEZ) because it includes auxiliary equipment of the plant whose electricity consumption is not paid by the Electricity Distributor.

#### **B.2. Data collection (accumulated data for the whole monitoring period):**

As the amount of electricity supplied to the grid from the JI project is defined as the key activity to monitor for verification process, the main data collected during the monitoring period are the **electricity invoices** issued on monthly basis to the Electricity Distributor. The

electronic copy of the invoices is stored into "*GHG emission reduction\Invoices*" folder. Production data history is also stored at Main Grid, the owner of measuring devices, in form of electricity sale invoices issued by Vez Svoghe. The information flow is described in "Monitoring Plan" document at § 2.4.2.

Further to the copy of electricity invoices, the "monitoring annual report" is generated and collected during the monitoring period.

### **B.3. Data processing and archiving:**

A new folder called "GHG emission reduction" has been created into the SCADA server including all documents related to the Monitoring Process. In particular, the following documents are stored:

- Monitoring plan-pdf format;
- Annex I-excel format;
- Annex II-excel format;
- Annex IV-scanned copy;
- Invoices-pdf format;
- Audit Report-pdf format;
- Monitoring annual report-pdf format;
- Non-conformities registry-pdf format;

The folder is protected by password which is known only by the Chief operation & maintenance, and the engineer in charge of monitoring process. The "Monitoring process" folder is structured as follows:

- Sub-folder called "Monitoring plan" which includes the procedures, Annex I, and Annex II;
- Sub-folder called "Invoices" which gathers all the invoices sent to CEZ;
- Sub-folder called "Annual Report" which includes the "Monitoring annual report\_20xx", and;
- Sub-folder called "quality control and assurance procedures" which includes the training certificate of the auditor, "audit reports", and non-conformities registry.

Name ▲	Size	Type	Date Modified
Monitoring plan		File Folder	7/4/2008 10:50 AM
Invoices		File Folder	7/4/2008 10:50 AM
Quality control and assurance procedures		File Folder	7/4/2008 10:50 AM
Annual Report		File Folder	7/4/2008 10:50 AM

**Figure 1: Structure of the "GHG emission reduction" folder**

All records are maintained in paper and electronic form until 2014 (during the crediting period plus two years) for JI project purposes.

## **SECTION C. Quality assurance and quality control measures**

### **C.1. Documented procedures and management plan**

The “Monitoring Plan” is the most relevant document including all the procedures. It is stored in the SCADA server in the following folder: //GHG emission reduction/Monitoring Plan.

#### **C.1.1. Roles and responsibilities:**

The personnel involved in the Monitoring process and their responsibilities are the following:

- Shift operator of Sreden Iskar Cascade Hydro Power Plants: he is responsible to control the correct operation of the SCADA System and ensure the proper operation of the measurement instruments;
- Auditor: he is responsible to perform internal audit (he cannot be the same person who is charge of monitoring process);
- Engineer in charge of monitoring process: he is responsible to assess and validate the reliability and accuracy of the data recorded. Furthermore, he is responsible to calculate the total annual Emission Reductions (see Annex I), update the monthly document (see Annex II), and generate the “Monitoring Annual Report” on status of the yearly Monitoring plan progress. He has also to liaise with the Chief operation & maintenance about any non - conformities;
- Chief operation & maintenance: responsible of the monitoring plan.

#### **C.1.2. Trainings:**

The internal auditor(s) have been trained by MWH in order to elaborate and plan the annual internal audit plan, execute the audits according to the approved plans, elaborate, submit and distribute pertinent reports, and supervise the implementation and fitting of amendment and preventive actions, if any.

### **C.2. Internal audits and control measures**

The procedure of internal auditing and control measures is included in the “Monitoring Plan”. This procedure has the purpose to describe the established system for the programming and execution of internal audits of the Monitoring Plan of Sreden Iskar Cascade Hydro Power Plants. The Internal Auditor must comply with the following requirements:

- He has to be trained by an Independent Company with proven expertise in developing PDD projects;
- He must be certified by an Independent Company as auditor (see Annex 5);
- He must have participated to at least one audit as observer;
- He can't be the same person involved in the monitoring process.

The internal audit for 2012 was performed on the 31<sup>st</sup> October 2012. Annex 6 includes the audit report drafted after the completion of internal audit process.

## SECTION D. Calculation of GHG emission reductions

### D.3.1. Project emissions

Since the Project is a hydropower project; it does not give rise to direct GHG emissions. Therefore no formulae for calculation of direct emissions are provided here.

$$PE_y = 0;$$

### D.3.2. Baseline emissions

Baseline emissions include only CO<sub>2</sub> emissions from electricity generation in fossil fuel fired power plants that are displaced due to the project activity, calculated as follows:

$$BE_y = (EG_y - EG_{\text{baseline}}) \times EF_{\text{grid, CM, y}}$$

Where

BE<sub>y</sub> = Baseline emissions in year y (tCO<sub>2</sub>/yr).

EG<sub>y</sub> = Electricity supplied by the project activity to the grid (MWh).

EG<sub>baseline</sub> = Baseline electricity supplied to the grid in the case of modified or retrofit facilities (MWh).

EF<sub>grid,CM,y</sub> = Combined margin CO<sub>2</sub> emission factor for grid connected power generation in year y.

Being the Sreden Iskar Cascade Hydro Power Plants an installation of a new grid-connected hydro power plant, the methodology ("CBM") ACM0002 Version 07 assumes that all project electricity generation above baseline levels (EG<sub>baseline</sub>) would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources. As the project activity is the installation of a new grid-connected hydro power plant, the EG<sub>baseline</sub> is equal to zero. Baseline emissions are calculated by the following formula:

$$BE_y = \sum_{i=1}^9 (EG_{yi} \times EF_{yi});$$

### D.3.3. Leakage

The main emissions potentially giving rise to leakage (LE<sub>y</sub>) in the context of electric sector projects are emissions arising due to activities such as power plant construction, fuel handling (extraction, processing, and transport), and land inundation. Project participants do not need to consider these emission sources as leakage in applying the current methodology.

This project activity does not claim any credit for the project on account of reducing these emissions below the level of the baseline scenario.

$$L_y = 0$$

### D.3.4. Summary of the emissions reductions during the monitoring period

Emission reductions are calculated as follows:



$$ER_y = BE_y - PE_y - L_y = BE_y = \sum_{i=1}^9 (EG_{yi} \times EF_{yi})$$

Joint Implementation Projects will very likely have an impact on the operation of an existing and new plant in the short term (marginal operating costs) as well as delay the implementation of a new plant in the longer term (marginal build costs). It will be possible to use a power sector model for forecasting of the build margin as well as of the operating margin.

According to the "Monitoring Plan", the emission factor adopted for the CO<sub>2</sub> emission reductions comes from the document "*Baseline Study of Joint Implementation projects in the Bulgarian energy sector*"<sup>2</sup> that have been carried out by the NEK in 2005 and it should be updated annually. The methodology used for Baseline Determination is developed on the basis of merit order dispatch analysis. This methodology does not consider the build margin as described in ACM0002. However, in case of Bulgaria it is appropriate to only consider the operating margin, because the combined margin concept was developed for CDM projects in developing countries where electricity demand exceeds electricity supply, and a CDM project will thus also potentially displace the construction of new power plants (reflected by the build margin). This is not the case of Bulgaria. The methodology adopted by the Ministry of Bulgaria is included in Annex 5.

The Ministry of Bulgaria has formally confirmed that the above mentioned document is taken into account while evaluating the CO<sub>2</sub> emission factor for JI projects developed in Bulgaria.

According to the PDD, the grid emission factor is evaluated ex-post. It means that the emission factor ex-post is considered in case the Ministry of Bulgaria updates the above mentioned Document including the new and updated emission factors. Otherwise, it will be used the latest value officially published.

The last update of the document "*Baseline Study of Joint Implementation projects in the Bulgarian energy sector*" dates back to 2005. The latest emission factor published by the NEK (May 5<sup>th</sup> 2005) has been considered since these values have been confirmed by the Ministry of Environment and Water (Annex 4). Two analyses are performed by the NEK:

1. Baseline emission factor for all plants, including nuclear and hydro-power plants;
2. Baseline emission factor for generation plants, less Nuclear, Pumped-Storage and Hydro-Power Plants;

The first approach is too imprecise to analyze the reduction of CO<sub>2</sub> emissions in a Joint-Implementation Project, because the operation of nuclear power plants and, to less extent, the operation of the four large hydro-power cascades of the power system are not influenced by the implementation of such projects. The second analysis has been considered in the current Monitoring Report. The next table summarises the latest emission factors published by the NEK for two scenarios: minimum demand and maximum demand.

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<sup>2</sup> See Annex 5 and [http://www.moew.government.bg/recent\\_doc/climate/Baseline%20CEF%20Summary.pdf](http://www.moew.government.bg/recent_doc/climate/Baseline%20CEF%20Summary.pdf)

Scenarios	UoM	2008	2009	2010	2011	2012
Scenario Stagnation – Minimum Demand	t <sub>CO2</sub> /MWh	1.078	0.956	0.917	0.902	0.899
Scenario Prosperity - Maximum Demand	t <sub>CO2</sub> /MWh	1.059	0.947	0.908	0.884	0.833

**Table 4: Dispatch data adjusted operating margin emission factor (latest emission factors)**

In order to be conservative the maximum demand scenario, which is resulting in lower carbon emission factors, has been considered (as in PDD calculations). The emission factor used to quantify the CO<sub>2</sub> emission reduction is 0.833 t<sub>CO2</sub>/MWh. The table below summarise the achieved emission reductions in 2012.

Year	Hydro Power Plant	Annual energy sold to the grid <sup>3</sup> (MWh)	Carbon Emission Factor <sup>4</sup> (t <sub>CO2</sub> /MWh)	Amount of achieved emission reduction (t <sub>CO2</sub> )
2012	Lakatnik (Until 31 <sup>th</sup> October)	9,538	0.833	7,945
2012	Svrazhen (Until 31 <sup>th</sup> October)	11,564		9,633
2012	Tzerovo (20 <sup>th</sup> April – 31 <sup>th</sup> October)	4,716		3,928
Total	HPPs	25,818		21,506

**Table 5: Achieved emission reductions in 2012 (until 31<sup>th</sup> October)**

<sup>3</sup> See Annex 1, 2 and 3;

<sup>4</sup> See Annex 4, 5;

Annex 1

**Monthly invoices**

**LAKATNIK**

## JANUARY

Вец Своге АД VEZ SVOGHE AD Доставчик / Supplier Адрес гр. София, бул. Христофор Колумб №41 Address Sofia, 41 Christopher Columbus Blvd.		ЧЕЗ ЕЛЕКТРО БЪЛГАРИЯ АД <i>Алиса Матарева</i> Получател / Recipient Адрес София, ул. "Г.С.Раковски" №140 Address				
Идентификационен номер по ДДС / VAT identification number BG201307919		Идентификационен номер по ДДС / VAT identification number BG175133827				
<input checked="" type="checkbox"/> ФАКТУРА / INVOICE <input type="checkbox"/> Дебитно известие / Debit note <input type="checkbox"/> Кредитно известие / Credit note		Място на сделката: България Place of the deal				
Към фактура № _____ To invoice No.		Номер 000000062 Number Дата на издаване: 31.1.2012 г. Date of issuance				
№	Наименование на стоките или услугите Name of goods or services	Мярка Measure	Количество Quantity	Един. цена Unit price	Отстъпка Discount	Стойност в BGN Value BGN
	Произведена електроенергия от МВЕЦ Лакатник за м. Януари по Протокол от 31.01.2012 Energy production from HPP Lakatnik for January according to Protocol from 31.01.2012	кВтч	689 672	0.07554		52 097.82
Основание за нулева ставка или неначисляване на ДДС: Legal ground for 0% VAT rate or nonapplication of VAT						Данъчна основа / Tax base 52 097.82
Словом всичко : шестдесет и две хиляди петстотин и седемнадесет лв. и 0.38 Say sixtytwo thousand five hundred and seventeen BGN and 0.38						Данъчна ставка ДДС % / Tax rate VAT 20%
Словом сума за плащане : шестдесет и две хиляди петстотин и седемнадесет лв. и 0.38 Amount to be paid say sixtytwo thousand five hundred and seventeen BGN and 0.38						Стойност на ДДС / VAT 10 419.56
						Всичко / Total 62 517.38
						Сума за плащане / Amount to be paid 62 517.38
Дата на данъчното събитие: 31.1.2012 г. Date of the tax event		Плащане: <input type="checkbox"/> в брой <input checked="" type="checkbox"/> с преводно нареждане Payment in cash bank transfer				
Съставил: Пламен Дилков / Plamen Dilkov Prepared by (име и фамилия) (подпис) / (name) (signature)		По IBAN BG33UNCR763010VZSVBGN1 BIC UNCRBGSF Bank identification При банка: Уникредит Булбанк АД, София, ЦУ, офис Св. Неделя Bank institution Unicredit Bulbank AD, Sofia, branch Sv. Nedelia				

## FEBRUARY

Вец Своге АД		ЧЕЗ ЕЛЕКТРО БЪЛГАРИЯ АД				
VEZ SVOGHE AD		Получател / Recipient				
Доставчик / Supplier		Адрес				
Адрес гр. София, бул. Христофор Колумб №41		София, ул. "Г.С. Раковски" №140				
Address Sofia, 41 Christopher Columbus Blvd.		Address				
Идентификационен номер по ДДС / VAT identification number		Идентификационен номер по ДДС / VAT identification number				
В   Г   2   0   1   3   0   7   9   1   9		В   Г   1   7   5   1   3   3   8   2   7				
ЕИК/ЕГН / UIC/PIN		ЕИК/ЕГН / UIC/PIN				
2   0   1   3   0   7   9   1   9		1   7   5   1   3   3   8   2   7				
<input checked="" type="checkbox"/> ФАКТУРА / INVOICE <input type="checkbox"/> Дебитно известие / Debit note <input type="checkbox"/> Кредитно известие / Credit note		Место на сделката: България Place of the deal				
Номер		0000000067				
Към фактура №		Дата на издаване: 29.2.2012 г.				
To invoice No.		Date of issuance				
№	Наименование на стоките или услугите Name of goods or services	Мярка Measure	Количество Quantity	Един. цена Unit price	Отстъпка Discount	Стойност в BGN Value BGN
	Произведена електроенергия от МВЕЦ Лакатник за м. Февруари по Протокол от 29.02.2012	кВтч	774 239	0.07554		58 486.01
	Energy production from HPP Lakatnik for February according to Protocol from 29.02.2012					
	Пълен размер на призната тарифа 0.21309 лв./кВтч					
	Fully recognised tariff 0.21309 BGN/ kWh					
Основание за нулева ставка или неначисляване на ДДС:					Данъчна основа / Tax base	58 486.01
Legal ground for 0% VAT rate or nonapplication of VAT					Данъчна ставка ДДС % / Tax rate VAT	20%
Словом всичко : Седемдесет хиляди сто осемдесет и три лв. и 0.21					Стойност на ДДС / VAT	11 697.20
Say Seventy thousand one hundred eightythree BGN and 0.21					Всичко / Total	70 183.21
Словом сума за плащане : Седемдесет хиляди сто осемдесет и три лв. и 0.21					Сума за плащане / Amount to be paid	70 183.21
Amount to be paid say Seventy thousand one hundred eightythree BGN and						
Дата на данъчното събитие: 29.2.2012 г.		Плащане:		<input type="checkbox"/> в брой <input checked="" type="checkbox"/> с преводно нареждане		
Date of the tax event		Payment		in cash bank transfer		
		По IBAN		BG33UNCR763010VZSVBGN1 BIC UNCRBGSF		
		Bank identification				
Съставил: Пламен Дилков / Plamen Dilkov		При банка:		Уникредит Булбанк АД, София, ЦУ, офис Св. Неделя		
Prepared by (име и фамилия) (подпис) / (name) (signature)		Bank institution		Unicredit Bulbank AD, Sofia, branch Sv. Nedelia		





MAY

Вещ Своге АД VEZ SVOGHE AD Доставчик / Supplier Адрес гр. София, бул. Христофор Колумб №41 Address Sofia, 41 Christopher Columbus Blvd.		О О Р R И I Г G И I Н N А A Л L	ЧЕЗ ЕЛЕКТРО БЪЛГАРИЯ АД Получател / Recipient Адрес София, ул. Т. С. Раковски №140 Address			
Идентификационен номер по ДДС / VAT identification number В Г 2 0 1 3 0 7 9 1 9 ЕИК/ЕГН / UIC/PIN 2 0 1 3 0 7 9 1 9			Идентификационен номер по ДДС / VAT identification number В Г 1 7 5 1 3 3 8 2 7 ЕИК/ЕГН / UIC/PIN 1 7 5 1 3 3 8 2 7			
<input checked="" type="checkbox"/> ФАКТУРА / INVOICE <input type="checkbox"/> Дебитно известие / Debit note <input type="checkbox"/> Кредитно известие / Credit note			Место на сделката: България Place of the deal			
Към фактура № _____ Дата на издаване: 31.5.2012 г. To invoice No. _____ Date of issuance			Номер 0000000086 Number			
№	Наименование на стоките или услугите Name of goods or services	Мярка Measure	Количество Quantity	Един. цена Unit price	Отстъпка Discount	Стойност в BGN Value BGN
	Произведена електроенергия от МВЕЦ Лакатник за м. Май по отчетен протокол от 31.05.2012 Energy production from HPP Lakatnik for May according to protocol from 31.05.2012	кВтч	1 449 048	0.21309		308 777.64
Основание за нулева ставка или неначисляване на ДДС: Legal ground for 0% VAT rate or nonapplication of VAT						Данъчна основа / Tax base 308 777.64
Словом всичко : триста и седемдесет хиляди петстотин тридесет и три лева и 0.17 Say three hundred seventy thousand five hundred thirtythree BGN and 0.17						Данъчна ставка ДДС % / Tax rate VAT 20%
Словом сума за плащане : триста и седемдесет хиляди петстотин тридесет и три лева и 0.17 Amount to be paid say three hundred seventy thousand five hundred thirtythree BGN and 0.17						Стойност на ДДС / VAT 61 755.53
Дата на данъчното събитие: 31.5.2012 г. Date of the tax event						Всичко / Total 370 533.17
Съставил: Пламен Дилков/ Plamen Dilkov Prepared by (име и фамилия) (подпис) / (name) (signature)						Сума за плащане / Amount to be paid 370 533.17
Плащане: <input type="checkbox"/> в брой <input checked="" type="checkbox"/> с преводно нареждане Payment In cash bank transfer			По IBAN BG33UNCR763010VZSVBGN1 BIC UNCRBGSF Bank identification			
			При банка: Уникредит Булбанк АД, София, ЦУ, офис Св. Неделя Bank Institution Unicredit Bulbank AD, Sofia, branch Sv. Nedelia			



JUNE

<b>Вец Своге АД</b> <b>VEZ SVOGHE AD</b> Доставчик / Supplier Адрес гр. София, бул. Христофор Колумб №41 Address Sofia, 41 Christopher Columbus Blvd.		О О Р Р И И Г Г И И Н Н А А Л Л	<b>ЧЕЗ ЕЛЕКТРО БЪЛГАРИЯ АД</b> Получател / Recipient Адрес София, ул. "Т.С.Раковски" №140 Address			
Идентификационен номер по ДДС / VAT Identification number В Г 2 0 1 3 0 7 9 1 9 ЕИК/ЕГН / UIC/PIN 2 0 1 3 0 7 9 1 9			Идентификационен номер по ДДС / VAT Identification number В Г 1 7 5 1 3 3 8 2 7 ЕИК/ЕГН / UIC/PIN 7 5 1 3 3 8 2 7			
<input checked="" type="checkbox"/> <b>ФАКТУРА / INVOICE</b> <input type="checkbox"/> Дебитно известие / Debit note <input type="checkbox"/> Кредитно известие / Credit note			Място на сделката: <b>България</b> Place of the deal			
Към фактура № _____ Дата на издаване: <b>30.6.2012</b> г. To invoice No. _____ Date of issuance			Номер <b>0000000092</b> Number			
<b>№</b>	<b>Наименование на стоките или услугите</b> Name of goods or services	<b>Мярка</b> Measure	<b>Количество</b> Quantity	<b>Един. цена</b> Unit price	<b>Отстъпка</b> Discount	<b>Стойност в BGN</b> Value BGN
	Произведена електроенергия от МВЕЦ Лакатник за м. Юни по отчетен протокол от 30.06.2012	кВтч	1 258 162	0.21309		268 101.74
	Energy production from HPP Lakatnik for June according to protocol from 30.06.2012					
Основание за нулева ставка или неначисляване на ДДС: Legal ground for 0% VAT rate or nonapplication of VAT			Данъчна основа / Tax base		268 101.74	
Словом всичко : триста двадесет и една хиляди седемстотин двадесет и два лв. и 0.09 Say three hundred twentyone thousand seven hundred twentytwo BGN and 0.09			Данъчна ставка ДДС % / Tax rate VAT		20%	
Словом сума за плащане : триста двадесет и една хиляди седемстотин двадесет и два лв. и 0.09 Amount to be paid say three hundred twentyone thousand seven hundred twentytwo BGN and 0.09			Стойност на ДДС / VAT		53 620.35	
			Всичко / Total		321 722.09	
			Сума за плащане / Amount to be paid		321 722.09	
Дата на данъчното събитие: <b>30.6.2012</b> г. Date of the tax event			Плащане: <input type="checkbox"/> в брой <input checked="" type="checkbox"/> с преводно нареждане Payment In cash bank transfer			
Съставил: <b>Пламен Дилков / Plamen Dilkov</b> Prepared by (име и фамилия) (подпис) / (name) (signature)			По IBAN <b>BG33UNCR763010VZSVBGN1</b> BIC UNCRBGSF Bank identification			
			При банка: <b>Уникредит Булбанк АД, София, ЦУ, офис Св. Неделя</b> Bank Institution Unicredit Bulbank AD, Sofia, branch Sv. Nedelia			

JULY

Вещ Своге АД VEZ SVOGHE AD Доставчик / Supplier Адрес гр. София, бул. Христофор Колумб №41 Address Sofia, 41 Christopher Columbus Blvd.		О О Р Р И И Г Г И И Н Н А А Л Л	ЧЕЗ ЕЛЕКТРО БЪЛГАРИЯ АД Получател / Recipient Адрес София, ул. Т.С.Раковски №140 Address			
Идентификационен номер по ДДС / VAT identification number В   Г   2   0   1   3   0   7   9   1   9			Идентификационен номер по ДДС / VAT identification number В   Г   1   7   5   1   3   3   8   2   7			
ЕИК/ЕГН / UIC/PIN 2   0   1   3   0   7   9   1   9		ЕИК/ЕГН / UIC/PIN 7   5   1   3   3   8   2   7				
<input checked="" type="checkbox"/> ФАКТУРА / INVOICE <input type="checkbox"/> Дебитно известие / Debit note <input type="checkbox"/> Кредитно известие / Credit note			Место на сделката: България Place of the deal			
Към фактура № _____ Дата на издаване: 31.7.2012 г. To invoice No. _____ Date of issuance			Номер 0000000096 Number			
№	Наименование на стоките или услугите Name of goods or services	Мярка Measure	Количество Quantity	Един. цена Unit price	Отстъпка Discount	Стойност в BGN Value BGN
	Произведена електроенергия от МВЕЦ Лакатник за м. Юли по отчетен протокол от 31.07.2012 Energy production from HPP Lakatnik for July according to protocol from 31.07.2012	кВтч	708 066	0.21309		150 881.78
Основание за нулева ставка или неначисляване на ДДС: Legal ground for 0% VAT rate or nonapplication of VAT Словом всичко : сто осемдесет и една хиляди и петдесет и осем лв и 0.14 Say one hundred eightyone thousand and fiftyeight BGN and 0.14 Словом сума за плащане : сто осемдесет и една хиляди и петдесет и осем лв и 0.14 Amount to be paid say one hundred eightyone thousand and fiftyeight BGN and 0.14						Данъчна основа / Tax base 150 881.78 Данъчна ставка ДДС % / Tax rate VAT 20% Стойност на ДДС / VAT 30 176.36 Всичко / Total 181 058.14 Сума за плащане / Amount to be paid 181 058.14
Дата на данъчното събитие: 31.7.2012 г. Date of the tax event			Плащане: <input type="checkbox"/> в брой <input checked="" type="checkbox"/> с преводно нареждане Payment in cash bank transfer По IBAN BG33UNCR763010VZSVBGN1 BIC UNCRBGSF Bank identification При банка: Уникредит Булбанк АД, София, ЦУ, офис Св. Неделя Bank institution Unicredit Bulbank AD, Sofia, branch Sv. Nedelia			
Съставил: Пламен Дилков / Plamen Dilkov Prepared by (име и фамилия) (подпис) / (name) (signature)						



## SEPTEMBER

<b>Вец Своге АД</b> <b>VEZ SVOGHE AD</b> Доставчик / Supplier Адрес гр. София, бул. Христофор Колумб №41 Address Sofia, 41 Christopher Columbus Blvd.		<b>О Р И Г И Н А Л</b>	<b>ЧЕЗ ЕЛЕКТРО БЪЛГАРИЯ АД</b> Получател / Recipient Адрес София, ул. Т. С. Раковски №140 Address																																				
Идентификационен номер по ДДС / VAT identification number В Г 2 0 1 3 0 7 9 1 9 ЕИК/ЕГН / UIC/PIN 2 0 1 3 0 7 9 1 9			Идентификационен номер по ДДС / VAT identification number В Г 1 7 5 1 3 3 8 2 7 ЕИК/ЕГН / UIC/PIN 1 7 5 1 3 3 8 2 7																																				
<input checked="" type="checkbox"/> <b>ФАКТУРА / INVOICE</b> <input type="checkbox"/> Дебитно известие / Debit note <input type="checkbox"/> Кредитно известие / Credit note			Место на сделката: България Place of the deal																																				
Към фактура № _____ To invoice No. _____			Номер _____ Number _____																																				
Дата на издаване: _____ г. Date of issuance _____			000000105 30.9.2012																																				
<table border="1"> <thead> <tr> <th>№</th> <th>Наименование на стоките или услугите Name of goods or services</th> <th>Мярка Measure</th> <th>Количество Quantity</th> <th>Един. цена Unit price</th> <th>Отстъпка Discount</th> <th>Стойност в BGN Value BGN</th> </tr> </thead> <tbody> <tr> <td></td> <td>Произведена електроенергия от МВЕЦ Лакатник за м. Септември по отчетен протокол от 30.09.2012 Energy production from HPP Lakatnik for September according to protocol from 30.09.2012</td> <td>кВтч</td> <td>223 288</td> <td>0.21309</td> <td></td> <td>47 580.44</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>		№	Наименование на стоките или услугите Name of goods or services	Мярка Measure	Количество Quantity	Един. цена Unit price	Отстъпка Discount	Стойност в BGN Value BGN		Произведена електроенергия от МВЕЦ Лакатник за м. Септември по отчетен протокол от 30.09.2012 Energy production from HPP Lakatnik for September according to protocol from 30.09.2012	кВтч	223 288	0.21309		47 580.44																						Основание за нулева ставка или неначиляване на ДДС: Legal ground for 0% VAT rate or nonapplication of VAT Словом всичко : петдесет и седем хиляди деветдесет и шест лв. и 0.53 Say <u>fiftyseven thousand ninety six BGN and 0.53</u> Словом сума за плащане : петдесет и седем хиляди деветдесет и шест лв. и 0.53 Amount to be paid say <u>fiftyseven thousand ninety six BGN and 0.53</u>		
№	Наименование на стоките или услугите Name of goods or services	Мярка Measure	Количество Quantity	Един. цена Unit price	Отстъпка Discount	Стойност в BGN Value BGN																																	
	Произведена електроенергия от МВЕЦ Лакатник за м. Септември по отчетен протокол от 30.09.2012 Energy production from HPP Lakatnik for September according to protocol from 30.09.2012	кВтч	223 288	0.21309		47 580.44																																	
Дата на данъчното събитие: _____ г. Date of the tax event _____		Данъчна основа / Tax base 47 580.44 Данъчна ставка ДДС % / Tax rate VAT 20% Стойност на ДДС / VAT 9 516.09 Общо / Total 57 096.53 Сума за плащане / Amount to be paid 57 096.53																																					
Съставил: Пламен Дилков/ Plamen Dilkov Prepared by _____ (име и фамилия) (подпис) / (name) (signature)		Плащане: <input type="checkbox"/> в брой <input checked="" type="checkbox"/> с преводно нареждане Payment <u>in cash</u> <u>bank transfer</u> По IBAN BG33UNCR763010VZSVBGN1 BIC UNCRBGSF Bank Identification При банка: Уникредит Булбанк АД, София, ЦУ, офис Св. Неделя Bank Institution <u>Unicredit Bulbank AD, Sofia, branch Sv. Nedelia</u>																																					

## OCTOBER

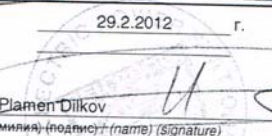
Вец Своре АД VEZ SVOGHE AD Доставчик / Supplier Адрес гр. София, бул. Христофор Колумб №41 Address Sofia, 41 Christopher Columbus Blvd.		О О Р Р И И Г Г И И Н Н А А Л Л	ЧЕЗ ЕЛЕКТРО БЪЛГАРИЯ АД Получател / Recipient Адрес София, ул. Т.С.Раковски №140 Address			
Идентификационен номер по ДДС / VAT identification number В   Г   2   0   1   3   0   7   9   1   9			Идентификационен номер по ДДС / VAT identification number В   Г   1   7   5   1   3   3   8   2   7			
ЕИК/ЕГН / UIC/PIN 2   0   1   3   0   7   9   1   9			ЕИК/ЕГН / UIC/PIN 1   7   5   1   3   3   8   2   7			
<input checked="" type="checkbox"/> ФАКТУРА / INVOICE <input type="checkbox"/> Дебитно известие / Debit note <input type="checkbox"/> Кредитно известие / Credit note Към фактура № _____ Дата на издаване: 31.10.2012 г. To invoice No. _____ Date of issuance			Место на сделката: България Place of the deal			
№ Наименование на стоките или услугите Name of goods or services		Мярка Measure	Количество Quantity	Един. цена Unit price	Отстъпка Discount	Стойност в BGN Value BGN
Произведена електроенергия от МВЕЦ Лакатник за м. Октомври по отчетен протокол от 31.10.2012 Energy production from HPP Lakatnik for October according to protocol from 31.10.2012		кВтч	407 853	0.21309		86 909.40
Основание за нулева ставка или неначиляване на ДДС: Legal ground for 0% VAT rate or nonapplication of VAT Словом всичко: сто и четири хиляди двеста деветдесет и един лв. и 0.28 Say one hundred and four thousand two hundred ninetyone BGN and 0.28 Словом сума за плащане: сто и четири хиляди двеста деветдесет и един лв. и 0.28 Amount to be paid say one hundred and four thousand two hundred ninetyone BGN and 0.28		Данъчна основа / Tax base 86 909.40		Данъчна ставка ДДС % / Tax rate VAT 20%		Стойност на ДДС / VAT 17 381.88
				Всичко / Total 104 291.28		Сума за плащане / Amount to be paid 104 291.28
Дата на данъчното събитие: 31.10.2012 г. Date of the tax event		Плащане: <input type="checkbox"/> в брой <input checked="" type="checkbox"/> с преводно нареждане Payment in cash bank transfer По IBAN BG33UNCR763010VZSVBGN1 BIC UNCRBGSF Bank Identification При банка: Уникредит Булбанк АД, София, ЦУ, офис Св. Неделя Bank Institution Unicredit Bulbank AD, Sofia, branch Sv. Nedelia				
Съставил: Пламен Дилков / Plamen Dilkov Prepared by (име и фамилия) (подпис) / (name) (signature)						

**Monthly invoices**

**SVRAZHEN**



## FEBRUARY

Вещ Своге АД VEZ SVOGHE AD		ЧЕЗ ЕЛЕКТРО БЪЛГАРИЯ АД	
Доставчик / Supplier Адрес гр. София, бул. Христофор Колумб №41 Address Sofia, 41 Christopher Columbus Blvd.		Получател / Recipient Адрес София, ул. "Г.С. Раковски" №140 Address	
Идентификационен номер по ДДС / VAT identification number В   Г   2   0   1   3   0   7   9   1   9		Идентификационен номер по ДДС / VAT identification number В   Г   1   7   5   1   3   3   8   2   7	
ЕИК/ЕГН / UIC/PIN 2   0   1   3   0   7   9   1   9		ЕИК/ЕГН / UIC/PIN 1   7   5   1   3   3   8   2   7	
<input checked="" type="checkbox"/> <b>ФАКТУРА / INVOICE</b>		Място на сделката: България Place of the deal	
<input type="checkbox"/> Дебитно известие / Debit note		Номер _____ Number	
<input type="checkbox"/> Кредитно известие / Credit note		0000000068	
Към фактура № _____ To invoice No.		Дата на издаване: 29.2.2012 г. Date of issuance	
№		Наименование на стоките или услугите Name of goods or services	
		Мярка Measure	
		Количество Quantity	
		Един. цена Unit price	
		Отстъпка Discount	
		Стойност в BGN Value BGN	
1		Произведена електроенергия от МВЕЦ Свражен за м. Февруари по отчетен протокол от 29.02.2012 Energy production from HPP Svrajen for February according to protocol from 29.02.2012	
		кВтч	
		953 183	
		0.07554	
		72 003.44	
2		Пълен размер на призната тарифа 0.21309 лв./кВтч Fully recognised tariff 0.21309 BGN/ kWh	
Основание за нулева ставка или неначисляване на ДДС: Legal ground for 0% VAT rate or nonapplication of VAT		Данъчна основа / Tax base	
Словом всичко : Осемдесет и шест хиляди четиристотин и четири лв. и 0.13 Say Eightysix thousand four hundred and four BGN and 0.13		72 003.44	
Словом сума за плащане : Осемдесет и шест хиляди четиристотин и четири лв. и 0.13 Amount to be paid say Eightysix thousand four hundred and four BGN and 0.13		Данъчна ставка ДДС % / Tax rate VAT	
		20%	
		Стойност на ДДС / VAT	
		14 400.69	
		Всичко / Total	
		86 404.13	
		Сума за плащане / Amount to be paid	
		86 404.13	
Дата на данъчното събитие: Date of the tax event		Плащане: Payment	
29.2.2012 г.		<input type="checkbox"/> в брой in cash	
		<input checked="" type="checkbox"/> с преводно нареждане bank transfer	
		По IBAN BG33UNCN763010VZSVBGN1 BIC UNCRBGSF	
Съставил: Пламен Дилков / Пламен Dilkov Prepared by (име и фамилия) (подпис) (name) (signature)		При банка: Bank institution	
		Уникредит Булбанк АД, София, ЦУ, офис Св. Неделя Unicredit Bulbank AD, Sofia, branch Sv. Nedelia	

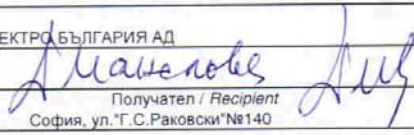





## MARCH

Вец Своге АД		О О		ЧЕЗ ЕЛЕКТРО БЪЛГАРИЯ АД	
VEZ SVOGHE AD		P R		Получател / Recipient	
Доставчик / Supplier		И И		Адрес: София, ул. "Т.С.Раковски" №140	
Адрес: гр. София, бул. Христофор Колумб №41		Г Г		Address	
Address: Sofia, 41 Christopher Columbus Blvd.		И И		Идентификационен номер по ДДС / VAT identification number	
Идентификационен номер по ДДС / VAT identification number		Н Н		В   G   1   7   5   1   3   3   8   2   7	
В   G   2   0   1   3   0   7   9   1   9		А А		ЕИК/ЕГН / UIC/PIN	
ЕИК/ЕГН / UIC/PIN		Л Л		1   7   5   1   3   3   8   2   7	
2   0   1   3   0   7   9   1   9					
<input checked="" type="checkbox"/> ФАКТУРА / INVOICE <input type="checkbox"/> Дебитно известие / Debt note <input type="checkbox"/> Кредитно известие / Credit note		Номер / Number: 0000000075 Към фактура № / To invoice No.: Дата на издаване: / Date of issuance: 31.3.2012 г.		Място на сделката: България Place of the deal	
№		Мярка / Measure		Количество / Quantity	
Наименование на стоките или услугите / Name of goods or services				Един. цена / Unit price	
Произведена електроенергия от МВЕЦ Свражен за м. Март по отчетен протокол от 31.03.2012		кВтч		0.21309	
Energy production from HPP Svrzhen for March according to protocol from 31.03.2012					
Основание за нулева ставка или неначисляване на ДДС:		Данъчна основа / Tax base		436 847.07	
Legal ground for 0% VAT rate or nonapplication of VAT		Данъчна ставка ДДС % / Tax rate VAT		20%	
Словом всичко: петстотин двадесет и четири хиляди двеста и шестнадесет лв. и 0.48		Стойност на ДДС / VAT		87 369.41	
Say five hundred twentyfour thousand two hundred and sixteen BGN and 0.48		Всичко / Total		524 216.48	
Словом сума за плащане: петстотин двадесет и четири хиляди двеста и лв. и 0.48		Сума за плащане / Amount to be paid		524 216.48	
Amount to be paid say five hundred twentyfour thousand two hundred and sixteen BGN and 0.48					
Дата на данъчното събитие: 31.3.2012 г. Date of the tax event		Плащане: <input type="checkbox"/> в брой <input checked="" type="checkbox"/> с преводно нареждане Payment: In cash / bank transfer			
Съставил: Пламен Дилков / Plamen Dilkov Prepared by (име и фамилия) (подпис) / (name) (signature)		По IBAN: BG33UNCR763010VZSVBGN1 BIC UNCRBGSF Bank / identification При банка: Уникредит Булбанк АД, София, ЦУ, офис Св. Неделя Bank / institution: Unicredit Bulbank AD, Sofia, branch Sv. Nedelia			

APRIL

Вец Своге АД VEZ SVOGHE AD Доставчик / Supplier Адрес гр. София, бул.Христофор Колумб №41 Address Sofia, 41 Christopher Columbus Blvd. Идентификационен номер по ДДС / VAT identification number BG 201307919 ЕИК/ЕГН / UIC/PIN 201307919		ЧЕЗ ЕЛЕКТРО БЪЛГАРИЯ АД  Получател / Recipient Адрес София, ул."Г.С.Раковски"№140 Address Идентификационен номер по ДДС / VAT identification number BG 175133827 ЕИК/ЕГН / UIC/PIN 175133827																																																		
<input checked="" type="checkbox"/> <b>ФАКТУРА / INVOICE</b> <input type="checkbox"/> Дебитно известие / Debit note <input type="checkbox"/> Кредитно известие / Credit note Към фактура № _____ Дата на издаване: 30.4.2012 г. To invoice No. _____ Date of issuance		Место на сделката: България Place of the deal																																																		
Основание за нулева ставка или неначисляване на ДДС: Legal ground for 0% VAT rate or nonapplication of VAT Словом всичко : петстотин седемдесет и една хиляди тринадесет лв. и 0.87 Say five hundred seventyone thousand thirteen BGN and 0.87 Словом сума за плащане : петстотин седемдесет и една хиляди тринадесет лв. и 0.87 Amount to be paid say five hundred seventyone thousand thirteen BGN and 0.87		<table border="1"> <thead> <tr> <th>№</th> <th>Наименование на стоките или услугите Name of goods or services</th> <th>Мярка Measure</th> <th>Количество Quantity</th> <th>Един. цена Unit price</th> <th>Отстъпка Discount</th> <th>Стойност в BGN Value BGN</th> </tr> </thead> <tbody> <tr> <td></td> <td>Произведена електроенергия от МВЕЦ Свражен за м. Април по отчетен протокол от 30.04.2012 Energy production from HPP Svrzhen for April according to protocol from 30.04.2012</td> <td>кВтч</td> <td>2 233 070</td> <td>0,21309</td> <td></td> <td>475 844.89</td> </tr> <tr> <td colspan="6">Данъчна основа / Tax base</td> <td>475 844.89</td> </tr> <tr> <td colspan="6">Данъчна ставка ДДС % / Tax rate VAT</td> <td>20%</td> </tr> <tr> <td colspan="6">Стойност на ДДС / VAT</td> <td>95 168.98</td> </tr> <tr> <td colspan="6">Всичко / Total</td> <td>571 013.87</td> </tr> <tr> <td colspan="6">Сума за плащане / Amount to be paid</td> <td>571 013.87</td> </tr> </tbody> </table>		№	Наименование на стоките или услугите Name of goods or services	Мярка Measure	Количество Quantity	Един. цена Unit price	Отстъпка Discount	Стойност в BGN Value BGN		Произведена електроенергия от МВЕЦ Свражен за м. Април по отчетен протокол от 30.04.2012 Energy production from HPP Svrzhen for April according to protocol from 30.04.2012	кВтч	2 233 070	0,21309		475 844.89	Данъчна основа / Tax base						475 844.89	Данъчна ставка ДДС % / Tax rate VAT						20%	Стойност на ДДС / VAT						95 168.98	Всичко / Total						571 013.87	Сума за плащане / Amount to be paid						571 013.87
№	Наименование на стоките или услугите Name of goods or services	Мярка Measure	Количество Quantity	Един. цена Unit price	Отстъпка Discount	Стойност в BGN Value BGN																																														
	Произведена електроенергия от МВЕЦ Свражен за м. Април по отчетен протокол от 30.04.2012 Energy production from HPP Svrzhen for April according to protocol from 30.04.2012	кВтч	2 233 070	0,21309		475 844.89																																														
Данъчна основа / Tax base						475 844.89																																														
Данъчна ставка ДДС % / Tax rate VAT						20%																																														
Стойност на ДДС / VAT						95 168.98																																														
Всичко / Total						571 013.87																																														
Сума за плащане / Amount to be paid						571 013.87																																														
Дата на данъчното събитие: 30.4.2012 г. Date of the tax event		Плащане: <input type="checkbox"/> в брой <input checked="" type="checkbox"/> с преводно нареждане Payment in cash bank transfer По IBAN BG33UNCR763010VZSVBGN1 BIC UNCRBGSF Bank identification При банка: Уникредит Булбанк АД, София, ЦУ, офис Св. Неделя Bank institution Unicredit Bulbank AD, Sofia, branch Sv. Nedelia																																																		
Съставил: Пламен Дилков / Plamen Dilkov Prepared by (име и фамилия) / (name) / (signature)																																																				

MAY

Вец Своере АД VEZ SVOGHE AD Доставчик / Supplier Адрес гр. София, бул.Христофор Колумб №41 Address Sofia, 41 Christopher Columbus Blvd.		О О Р Р И И Г Г И И Н Н А А Л Л	ЧЕЗ ЕЛЕКТРО БЪЛГАРИЯ АД Получател / Recipient Адрес София, ул."Т.С.Раковски"№140 Address			
Идентификационен номер по ДДС / VAT Identification number В   Г   2   0   1   3   0   7   9   1   9			Идентификационен номер по ДДС / VAT Identification number В   Г   1   7   5   1   3   3   8   2   7			
ЕИК/ЕГН / UIC/PIN 2   0   1   3   0   7   9   1   9			ЕИК/ЕГН / UIC/PIN 1   7   5   1   3   3   8   2   7			
<input checked="" type="checkbox"/> <b>ФАКТУРА / INVOICE</b> <input type="checkbox"/> Дебитно известие / Debt note <input type="checkbox"/> Кредитно известие / Credit note			Място на сделката: <u>България</u> Place of the deal			
Номер <u>0000000087</u> Към фактура № _____ Дата на издаване: <u>31.5.2012</u> г. To invoice No. _____ Date of issuance						
№ Наименование на стоките или услугите Name of goods or services		Мярка Measure	Количество Quantity	Един. цена Unit price	Отстъпка Discount	Стойност в BGN Value BGN
Произведена електроенергия от МВЕЦ Свражен за м. Май по отчетен протокол от 31.05.2012 Energy production from HPP Svrzhen for May according to protocol from 31.05.2012		кВтч	1 698 947	0.21309		362 028.62
Основание за нулева ставка или неначисляване на ДДС: Legal ground for 0% VAT rate or nonapplication of VAT Словом всичко : четиристотин тридесет и четири хиляди четиристотин тридесет и четири лева и 0.34 Say four hundred thirtyfour thousand four hundred thirtyfour BGN and 0.34 Словом сума за плащане : четиристотин тридесет и четири хиляди четиристотин тридесет и четири лева и 0.34 Amount to be paid say		Данъчна основа / Tax base Данъчна ставка ДДС % / Tax rate VAT Стойност на ДДС / VAT Всичко / Total Сума за плащане / Amount to be paid		362 028.62 20% 72 405.72 434 434.34 434 434.34		
Дата на данъчното събитие: <u>31.5.2012</u> г. Date of the tax event		Плащане: <input type="checkbox"/> в брой <input checked="" type="checkbox"/> с преводно нареждане Payment In cash bank transfer По IBAN <u>BG33UNCR763010VZSVBGN1</u> BIC <u>UNCRBGSF</u> Bank Identification При банка: <u>Уникредит Булбанк АД, София, ЦУ, офис Св. Неделя</u> Bank Institution Unicredit Bulbank AD, Sofia, branch Sv. Nedelia				
Съставил: <u>Пламен Дилков/ Plamen Dilkov</u> Prepared by (име и фамилия) (подпис) / (name) (signature)						



## JULY

Вец Своге АД		О О		ЧЕЗ ЕЛЕКТРО БЪЛГАРИЯ АД		
VEZ SVOGHE AD		P R		Получател / Recipient		
Доставчик / Supplier		И И		Адрес София, ул.Т.С.Раковски№140		
Адрес гр.София, бул.Христофор Колумб №41		Г Г		Адрес		
Address Sofia, 41 Christopher Columbus Blvd.		И И		Идентификационен номер по ДДС / VAT indotification number		
Идентификационен номер по ДДС / VAT indotification number		Н Н		В   G   1   7   5   1   3   3   8   2   7		
В   G   2   0   1   3   0   7   9   1   9		А А		ЕИК/ЕГН / UIC/PIN		
ЕИК/ЕГН / UIC/PIN		Л Л		1   7   5   1   3   3   8   2   7		
2   0   1   3   0   7   9   1   9						
<input checked="" type="checkbox"/> ФАКТУРА / INVOICE <input type="checkbox"/> Дебитно известие / Debit note <input type="checkbox"/> Кредитно известие / Credit note		Номер 0000000097 Number		Място на сделката: България Place of the deal		
Към фактура № _____ To invoice No.		Дата на издаване: 31.7.2012 г. Date of issuance				
№	Наименование на стоките или услугите Name of goods or services	Мярка Measure	Количество Quantity	Един. цена Unit price	Отстъпка Discount	Стойност в BGN Value BGN
	Произведена електроенергия от МВЕЦ Свражен за м. Юли по отчетен протокол от 31.07.2012	кВтч	821 224	0.21309		174 994.62
	Energy production from HPP Svräjen for July according to protocol from 31.07.2012					
Основание за нулева ставка или неначисляване на ДДС:					Данъчна основа / Tax base	174 994.62
Legal ground for 0% VAT rate or nonapplication of VAT					Данъчна ставка ДДС % / Tax rate VAT	20%
Словом всичко : двеста и девет хиляди деветстотин деветдесет и три лв. и 0.54					Стойност на ДДС / VAT	34 998.92
Say two hundred and nine thousand nine hundred ninetythree BGN and 0.54					Всичко / Total	209 993.54
Словом сума за плащане : двеста и девет хиляди деветстотин деветдесет и три лв. и 0.54					Сума за плащане / Amount to be paid	209 993.54
Amount to be paid say two hundred and nine thousand nine hundred ninetythree BGN and 0.54						
Дата на данъчното събитие: 31.7.2012 г. Date of the tax event		Плащане: <input type="checkbox"/> в брой <input checked="" type="checkbox"/> с преводно нареждане Payment in cash bank transfer По IBAN BG33UNCN763010VZSVBGN1 BIC UNCRBGSF Bank identification При банка: Уникредит Булбанк АД, София, ЦУ, офис Св. Неделя Bank institution Unicredit Bulbank AD, Sofia, branch Sv. Nedelia				
Съставил: Пламен Дилков/ Plamen Dilkov Prepared by (име и фамилия) (подпис) / (name) (signature)						

## AUGUST

Вец Своге АД VEZ SVOGHE AD Доставчик / Supplier Адрес гр. София, бул. Христофор Колумб №41 Address Sofia, 41 Christopher Columbus Blvd.		О О Р R И I Г G И I Н N А A Л L	ЧЕЗ ЕЛЕКТРО БЪЛГАРИЯ АД Получател / Recipient Адрес София, ул. "Г.С. Раковски" №140 Address			
Идентификационен номер по ДДС / VAT identification number В Г 2 0 1 3 0 7 9 1 9 ЕИК/ЕГН / UIC/PIN 2 0 1 3 0 7 9 1 9			Идентификационен номер по ДДС / VAT identification number В Г 1 7 5 1 3 3 8 2 7 ЕИК/ЕГН / UIC/PIN 1 7 5 1 3 3 8 2 7			
<input checked="" type="checkbox"/> <b>ФАКТУРА / INVOICE</b> <input type="checkbox"/> Дебитно известие / Debit note <input type="checkbox"/> Кредитно известие / Credit note			Място на сделката: България Place of the deal			
Към фактура № _____ To invoice No.		Дата на издаване: 31.8.2012 г. Date of issuance		Номер 000000101 Number		
№	Наименование на стоките или услугите Name of goods or services	Мярка Measure	Количество Quantity	Един. цена Unit price	Отстъпка Discount	Стойност в BGN Value BGN
	Произведена електроенергия от МВЕЦ Свражен за м. Август по отчетен протокол от 31.08.2012 Energy production from HPP Svrajen for August according to protocol from 31.08.2012	кВтч	574 968	0.21309		122 519.93
Основание за нулева ставка или неначисляване на ДДС: Legal ground for 0% VAT rate or nonapplication of VAT						Данъчна основа / Tax base 122 519.93
Словом всичко : сто четиридесет и седем хиляди двадесет и три лв. и 0.92 Say one hundred fortyseven thousand twentythree BGN and 0.92						Данъчна ставка ДДС % / Tax rate VAT 20%
Словом сума за плащане : сто четиридесет и седем хиляди двадесет и три лв. и 0.92 Amount to be paid say one hundred fortyseven thousand twentythree BGN and 0.92						Стойност на ДДС / VAT 24 503.99
						Всичко / Total 147 023.92
						Сума за плащане / Amount to be paid 147 023.92
Дата на данъчното събитие: 31.8.2012 г. Date of the tax event		Плащане: <input type="checkbox"/> в брой <input checked="" type="checkbox"/> с преводно нареждане Payment in cash bank transfer				
Съставил: Пламен Дилков / Plamen Dilkov Prepared by (име и фамилия) (подпис) / (name) (signature)		По IBAN BG33UNCR763010VZSVBGN1 BIC UNCRBGSF Bank identification При банка: Уникредит Булбанк АД, София, ЦУ, офис Св. Неделя Bank institution Unicredit Bulbank AD, Sofia, branch Sv. Nedelia				







**Monthly invoices**

**TZEROVO**



Вец Своге АД VEZ SVOGHE AD Доставчик / Supplier Адрес гр. София, бул. Христофор Колумб №41 Address Sofia, 41 Christopher Columbus Blvd.		О О Р Р И И Г Г И И Н Н А А Л Л	ЧЕЗ ЕЛЕКТРО БЪЛГАРИЯ АД Получател / Recipient Адрес София, ул. "Т.С.Раковски" №140 Address				
Идентификационен номер по ДДС / VAT identification number В Г 2 0 1 3 0 7 9 1 9 ЕИК/ЕГН / UIC/PIN 2 0 1 3 0 7 9 1 9			Идентификационен номер по ДДС / VAT identification number В Г 1 7 5 1 3 3 8 2 7 ЕИК/ЕГН / UIC/PIN 1 7 5 1 3 3 8 2 7				
<input checked="" type="checkbox"/> <b>ФАКТУРА / INVOICE</b> <input type="checkbox"/> Дебитно известие / Debit note <input type="checkbox"/> Кредитно известие / Credit note Към фактура № _____ Дата на издаване: 31.5.2012 г. To invoice No. _____ Date of issuance			Място на сделката: България Place of the deal				
№ Наименование на стоките или услугите Name of goods or services Произведена електроенергия от МВЕЦ Церово за периода 17.05.2012- 31.05.2012 по отчетен протокол от 31.05.2012 Energy production from HPP Tserovo for the period 17.05.2012- 31.05.2012 according to protocol from 31.05.2012			Мярка Measure кВтч	Количество Quantity 672 762	Един. цена Unit price 0.22283	Отстъпка Discount	Стойност в BGN Value BGN 149 911.56
Основание за нулева ставка или неначисляване на ДДС: Legal ground for 0% VAT rate or nonapplication of VAT Словом всичко : сто седемдесет и девет хиляди осемстотин деветдесет и три лева и 0.87 Say one hundred seventy-nine thousand eight hundred ninety-three and 0.87 Словом сума за плащане : сто седемдесет и девет хиляди осемстотин деветдесет и три лева и 0.87 Amount to be paid say one hundred seventy-nine thousand eight hundred ninety-three and 0.87			Данъчна основа / Tax base 149 911.56		Данъчна ставка ДДС % / Tax rate VAT 20%	Стойност на ДДС / VAT 29 982.31	Всичко / Total 179 893.87
Дата на данъчното събитие: 31.5.2012 г. Date of the tax event			Плащане: <input type="checkbox"/> в брой <input checked="" type="checkbox"/> с преводно нареждане Payment in cash bank transfer По IBAN BG33UNCR763010VZSVBGN1 BIC UNCRBGSF Bank identification При банка: Уникредит Булбанк АД, София, ЦУ, офис Св. Неделя Bank institution Unicredit Bulbank AD, Sofia, branch Sv. Nedelia				
Съставил: Пламен Дилков / Plamen Dilkov Prepared by (име и фамилия) (подпис) / (name) (signature)							

## JUNE

Вец Своге АД VEZ SVOGHE AD Доставчик / Supplier Адрес гр.София, бул.Христофор Колумб №41 Address Sofia, 41 Christopher Columbus Blvd.		О О Р Р И И Г Г И И Н Н А А Л Л	ЧЕЗ ЕЛЕКТРО БЪЛГАРИЯ АД Получател / Recipient Адрес София, ул.Т.С.Раковски №140 Address			
Идентификационен номер по ДДС / VAT identification number В   Г   2   0   1   3   0   7   9   1   9			Идентификационен номер по ДДС / VAT identification number В   Г   1   7   5   1   3   3   8   2   7			
ЕИК/ЕГН / UIC/PIN 2   0   1   3   0   7   9   1   9		ЕИК/ЕГН / UIC/PIN 1   7   5   1   3   3   8   2   7				
<input checked="" type="checkbox"/> <b>ФАКТУРА / INVOICE</b> <input type="checkbox"/> Дебитно известие / Debit note <input type="checkbox"/> Кредитно известие / Credit note		Место на сделката: <u>България</u> Place of the deal				
Към фактура № _____ Дата на издаване: <u>30.6.2012</u> г. To invoice No. _____ Date of issuance		Номер <u>000000094</u> Number				
№	Наименование на стоките или услугите Name of goods or services	Мярка Measure	Количество Quantity	Един. цена Unit price	Отстъпка Discount	Стойност в BGN Value BGN
	Произведена електроенергия от МВЕЦ Церово за м. Юни по отчетен протокол от 30.06.2012 Energy production from HPP Tserovo for June according to protocol from 30.06.2012	кВтч	1 139 698	0.22283		253 958.46
Основание за нулева ставка или неначисляване на ДДС: Legal ground for 0% VAT rate or nonapplication of VAT					Данъчна основа / Tax base 253 958.46	
Словом всичко : триста и четири хиляди седемстотин и петдесет лв. и 0.15 three hundred and four thousand seven hundred and fifty BGN and 0.15					Данъчна ставка ДДС % / Tax rate VAT 20%	
Словом сума за плащане : триста и четири хиляди седемстотин и петдесет лв. и 0.15 Amount to be paid say three hundred and four thousand seven hundred and fifty BGN and 0.15					Стойност на ДДС / VAT 50 791.69	
					Всичко / Total 304 750.15	
					Сума за плащане / Amount to be paid 304 750.15	
Дата на данъчното събитие: <u>30.6.2012</u> г. Date of the tax event		Плащане: <input type="checkbox"/> в брой <input checked="" type="checkbox"/> с преводно нареждане Payment in cash bank transfer				
Съставил: <u>Пламен Дилков / Plamen Dilkov</u> Prepared by (име и фамилия) (подпис) / (name) (signature)		По IBAN <u>BG33UNCR763010VZSVBGN1</u> BIC <u>UNCRBGSF</u> Bank identification При банка: <u>Уникредит Булбанк АД, София, ЦУ, офис Св. Неделя</u> Bank institution Unicredit Bulbank AD, Sofia, branch Sv. Nedelia				

## JULY

Вец Своре АД VEZ SVOGHE AD Доставчик / Supplier Адрес гр. София, бул.Христофор Колумб №41 Address Sofia, 41 Christopher Columbus Blvd.		О О Р Р И И Г Г И И Н Н А А Л Л	ЧЕЗ ЕЛЕКТРО БЪЛГАРИЯ АД Получател / Recipient Адрес София, ул.Т.С.Раковски№140 Address			
Идентификационен номер по ДДС / VAT identification number В Г 2 0 1 3 0 7 9 1 9 ЕИК/ЕГН / UIC/PIN 2 0 1 3 0 7 9 1 9			Идентификационен номер по ДДС / VAT identification number В Г 1 7 5 1 3 3 8 2 7 ЕИК/ЕГН / UIC/PIN 1 7 5 1 3 3 8 2 7			
<input checked="" type="checkbox"/> <b>ФАКТУРА / INVOICE</b> <input type="checkbox"/> Дебитно известие / Debit note <input type="checkbox"/> Кредитно известие / Credit note			Место на сделката: България Place of the deal			
Към фактура № _____ To invoice No.			Номер _____ Number			
Дата на издаване: 31.7.2012 г. Date of issuance						
№	Наименование на стоките или услугите Name of goods or services	Мярка Measure	Количество Quantity	Един. цена Unit price	Отстъпка Discount	Стойност в BGN Value BGN
	Произведена електроенергия от МВЕЦ Церово за м. Юли по отчетен протокол от 31.07.2012	кВтч	709 777	0.22283		158 159.61
	Energy production from HPP Tserovo for July according to protocol from 31.07.2012					
Основание за нулева ставка или неначисляване на ДДС: Legal ground for 0% VAT rate or nonapplication of VAT						Данъчна основа / Tax base 158 159.61
Словом всичко : сто осемдесет и девет хиляди седемстотин деветдесет и един лв и 0.53 Say one hundred eighty-nine thousand seven hundred ninety one BGN and 0.53						Данъчна ставка ДДС % / Tax rate VAT 20%
Словом сума за плащане : сто осемдесет и девет хиляди седемстотин и един лв и 0.53 Amount to be paid say one hundred eighty-nine thousand seven hundred ninety one BGN and 0.53						Стойност на ДДС / VAT 31 631.92
						Всичко / Total 189 791.53
						Сума за плащане / Amount to be paid 189 791.53
Дата на данъчното събитие: 31.7.2012 г. Date of the tax event			Плащане: <input type="checkbox"/> в брой <input checked="" type="checkbox"/> с преводно нареждане Payment in cash bank transfer По IBAN BG33UNCR763010VZSVBGN1 BIC UNCRBGSF Bank / identification При банка: Уникредит Булбанк АД, София, ЦУ, офис Св. Неделя Bank / institution Unicredit Bulbank AD, Sofia, branch Sv. Nedelia			
Съставил: Пламен Дилков/ Plamen Dilkov Prepared by (име и фамилия) (подпис) / (name) (signature)						

## AUGUST

Вец Своге АД VEZ SVOGHE AD Доставчик / Supplier Адрес гр. София, Бул. Христофор Колумб №41 Address Sofia, 41 Christopher Columbus Blvd.		О Р И Г И Н А Л	ЧЕЗ ЕЛЕКТРО БЪЛГАРИЯ АД Получател / Recipient Адрес София, ул. "Г.С. Раковски" №140 Address			
Идентификационен номер по ДДС / VAT identification number В   Г   2   0   1   3   0   7   9   1   9			Идентификационен номер по ДДС / VAT identification number В   Г   1   7   5   1   3   3   8   2   7			
ЕИК/ЕГН / UIC/PIN 2   0   1   3   0   7   9   1   9			ЕИК/ЕГН / UIC/PIN 1   7   5   1   3   3   8   2   7			
<input checked="" type="checkbox"/> <b>ФАКТУРА / INVOICE</b> <input type="checkbox"/> Дебитно известие / Debt note <input type="checkbox"/> Кредитно известие / Credit note			Място на сделката: България Place of the deal			
Към фактура № _____ To invoice No		Дата на издаване: 31.8.2012 г. Date of issuance		Номер 000000102 Number		
№	Наименование на стоките или услугите Name of goods or services	Мярка Measure	Количество Quantity	Един. цена Unit price	Отстъпка Discount	Стойност в BGN Value BGN
	Произведена електроенергия от МВЕЦ Церово за м. Август по отчетен протокол от 31.08.2012 Energy production from HPP Tserovo for August according to protocol from 31.08.2012	кВтч	541 845	0.22283		120 739.32
Основание за нулева ставка или неначисляване на ДДС: Legal ground for 0% VAT rate or nonapplication of VAT						Данъчна ставка ДДС % / Tax rate VAT 20%
Словом всичко : сто четиридесет и четири хиляди осемстотин осемдесет и седем лв. и 0.18 Say one hundred fortyfour thousand eight hundred eightyseven BGN and 0.18						Стойност на ДДС / VAT 24 147.86
Словом сума за плащане : сто четиридесет и четири хиляди осемстотин осемдесет и седем лв. и 0.18 Amount to be paid say one hundred fortyfour thousand eight hundred eightyseven BGN and 0.18						Всичко / Total 144 887.18
Дата на данъчното събитие: 31.8.2012 г. Date of the tax event			Плащане: <input type="checkbox"/> в брой <input checked="" type="checkbox"/> с преводно нареждане Payment in cash bank transfer По IBAN BG33UNCR763010VZSVBGN1 BIC UNCRBGSF Bank identification При банка: Уникредит Булбанк АД, София, ЦУ, офис Св. Неделя Bank institution Unicredit Bulbank AD, Sofia, branch Sv. Nedelia			
Съставил: Пламен Дилкова / Plamen Dilkov Prepared by (име и фамилия) (name) (signature)						

## SEPTEMBER

Вец Своге АД				ЧЕЗ ЕЛЕКТРО БЪЛГАРИЯ АД		
VEZ SVOGHE AD						
Доставчик / Supplier		O O		Получател / Recipient		
Адрес гр. София, бул. Христофор Колумб №41		P R		Адрес София, ул. Т.С. Раковски №140		
Address Sofia, 41 Christopher Columbus Blvd.		И И		Address		
		Г Г				
Идентификационен номер по ДДС / VAT identification number		И И		Идентификационен номер по ДДС / VAT identification number		
В   Г   2   0   1   3   0   7   9   1   9		Н Н		В   Г   1   7   5   1   3   3   8   2   7		
ЕИК/ЕГН / UIC/PIN		А А		ЕИК/ЕГН / UIC/PIN		
2   0   1   3   0   7   9   1   9		Л Л		1   7   5   1   3   3   8   2   7		
<input checked="" type="checkbox"/> ФАКТУРА / INVOICE		Номер 000000107		Място на сделката: България		
<input type="checkbox"/> Дебитно известие / Debit note		Number		Place of the deal		
<input type="checkbox"/> Кредитно известие / Credit note						
Към фактура № _____		Дата на издаване: 30.9.2012 г.				
To invoice No. _____		Date of issuance				
№	Наименование на стоките или услугите Name of goods or services	Мярка Measure	Количество Quantity	Един. цена Unit price	Отстъпка Discount	Стойност в BGN Value BGN
	Произведена електроенергия от МВЕЦ Церово за м. Септември по отчетен протокол от 30.09.2012	кВтч	442 900	0,22283		98 691.41
	Energy production from HPP Tserovo for September according to protocol from 30.09.2012					
Основание за нулева ставка или неначисляване на ДДС:					Данъчна основа / Tax base	98 691.41
Legal ground for 0% VAT rate or nonapplication of VAT					Данъчна ставка ДДС % / Tax rate VAT	20%
Словом всичко : сто и осемнадесет хиляди четиристотин двадесет и девет лв. и 0.69					Стойност на ДДС / VAT	19 738.28
Say one hundred and eighteen thousand four hundred twenty-nine BGN and 0.69					Всичко / Total	118 429.69
Словом сума за плащане : сто и осемнадесет хиляди четиристотин двадесет и девет лв. и 0.69					Сума за плащане / Amount to be paid	118 429.69
Amount to be paid say one hundred and eighteen thousand four hundred twenty-nine BGN and 0.69						
Дата на данъчното събитие: 30.9.2012 г.			Плащане: <input type="checkbox"/> в брой <input checked="" type="checkbox"/> с преводно нареждане			
Date of the tax event			Payment in cash bank transfer			
			По IBAN BG33UNCR763010VZSVBGN1 BIC UNCRBGSF			
			Bank Identification			
Съставил: Пламен Дилков/ Plamen Dilkov			При банка: Уникредит Булбанк АД, София, ЦУ, офис Св. Неделя			
Prepared by (име и фамилия) (подпис) / (name) (signature)			Bank Institution Unicredit Bulbank AD, Sofia, branch Sv. Nedelia			

## OCTOBER

Вец Своге АД		ЧЕЗ ЕЛЕКТРО БЪЛГАРИЯ АД				
VEZ SVOGHE AD						
Доставчик / Supplier		Получател / Recipient				
Адрес гр. София, бул. Христофор Колумб №41		Адрес София, ул. Т.С.Раковски №140				
Address Sofia, 41 Christopher Columbus Blvd.		Address				
Идентификационен номер по ДДС / VAT Identification number		Идентификационен номер по ДДС / VAT Identification number				
В   Г   2   0   1   3   0   7   9   1   9		В   Г   1   7   5   1   3   3   8   2   7				
ЕИК/ЕГН / UIC/PIN		ЕИК/ЕГН / UIC/PIN				
2   0   1   3   0   7   9   1   9		1   7   5   1   3   3   8   2   7				
<input checked="" type="checkbox"/> ФАКТУРА / INVOICE <input type="checkbox"/> Дебитно известие / Debt note <input type="checkbox"/> Кредитно известие / Credit note		Место на сделката: България Place of the deal				
Номер _____		Номер _____				
Към фактура № _____		Дата на издаване: 31.10.2012 г.				
To invoice No. _____		Date of issuance				
№	Наименование на стоките или услугите Name of goods or services	Мярка Measure	Количество Quantity	Един. цена Unit price	Отстъпка Discount	Стойност в BGN Value BGN
	Произведена електроенергия от МВЕЦ Церово за м.Октомври по отчетен протокол от 31.10.2012	кВтч	505 905	0.22283		112 730.81
	Energy production from HPP Tserovo for October according to protocol from 31.10.2012					
Основание за нулева ставка или неначисляване на ДДС:					Данъчна основа / Tax base	112 730.81
Legal ground for 0% VAT rate or nonapplication of VAT					Данъчна ставка ДДС % / Tax rate VAT	20%
Словом всичко : сто тридесет и пет хиляди двеста седемдесет и шест лв. и 0.97					Стойност на ДДС / VAT	22 546.16
Say one hundred thirtyfive thousand two hundred seventysix BGN and 0.97					Всичко / Total	135 276.97
Словом сума за плащане : сто тридесет и пет хиляди двеста седемдесет и шест лв.и 0.97					Сума за плащане / Amount to be paid	135 276.97
Amount to be paid say one hundred thirtyfive thousand two hundred seventysix BGN and 0.97						
Дата на данъчното събитие: 31.10.2012 г.		Плащане: <input type="checkbox"/> в брой <input checked="" type="checkbox"/> с преводно нареждане				
Date of the tax event		Payment in cash bank transfer				
		По IBAN BG33UNCR763010VZSVBGN1 BIC UNCRBGSF				
		Bank identification				
Съставил: Пламен Дилков/ Plamen Dilkov		При банка: Уникредит Булбанк АД, София, ЦУ, офис Св. Неделя				
Prepared by (име и фамилия) (подпис) / (name) (signature)		Bank Institution Unicredit Bulbank AD, Sofia, branch Sv. Nedelia				



Annex 2

## Annual electricity production

<b>Vež Svoghe JSC: "Project Company"</b>										
<b>Monitoring Plan—ANNEX II</b>										
Monthly recording										
Year	Hydro power plant	Lakatnik	Lakatnik	Note	Svrajhen	Svrajhen	Note	Tzerovo	Tzerovo	Note
UoM	UoM	MWh	MWh		MWh	MWh		MWh	MWh	
<b>2012</b>	January		690			776				
	February		774			953				
	March		1,599			2,050				
	April		1,965			2,233			174	
	May		1,449			1,699			1,201	
	June		1,258			1,498			1,140	
	July		708			821			710	
	August		464			575			542	
	September		223			418			443	
	October		408			541			506	
	November									
	December									
<b>TOTAL 2012</b>			9,538			11,564		0	4,716	
<b>TOTAL 2008-2012</b>			55,442			50,223		0	4,716	

**Monthly electricity production (from invoices)<sup>5</sup>**

<sup>5</sup> The real production of the Tzerovo in the month of April has been 184 MWh, nonetheless CEZ has not paid the amount of energy introduced in the grid during the commissioning (10 MWh). Therefore the amount invoiced has been 174 MWh.

## Annex 3

CO<sub>2</sub> Emission reduction calculations

Company: Vez Svoghe J.S.C.: "Project Company"		Reference: HPP Lakatnik						
Efficiency Measure: Establishment of Hydro power plant								
		Year						
<b>BASELINE CALCULATION</b>		2007	2008	2009	2010	2011	2012	Note
Annual electricity saved from the grid	MWh	0	4.744	13.014	16.324	11.822	9.499	Imported from Annex II
CO <sub>2</sub> emissions from electricity production	tCO <sub>2</sub>	0	5.024	12.324	14.822	10.451	7.913	
Company: Vez Svoghe J.S.C.: "Project Company"		Reference: HPP Lakatnik						
Efficiency Measure: Establishment of Hydro power plant								
		Year						
<b>PROJECT EMISSIONS</b>		2007	2008	2009	2010	2011	2012	Note
Annual electricity production from the HPP	MWh	0	0	0	0	0	0	
CO <sub>2</sub> emissions from electricity production	tCO <sub>2</sub>	0	0	0	0	0	0	
Company: Vez Svoghe J.S.C.: "Project Company"		Reference: HPP Lakatnik						
Efficiency Measure: Establishment of Hydro power plant								
		Year						
<b>EMISSIONS REDUCTION</b>		2007	2008	2009	2010	2011	2012	Note
Baseline scenario emission	tCO <sub>2</sub>	0	5.024	12.324	14.822	10.451	7.913	
Project scenario emission	tCO <sub>2</sub>	0	0	0	0	0	0	
Total project emission reduction	tCO <sub>2</sub>	0	5.024	12.324	14.822	10.451	7.913	Total crediting period 2008-2012= 50.533
Company: Vez Svoghe J.S.C.: "Project Company"		Reference: HPP Svrjhen						
Efficiency Measure: Establishment of Hydro power plant								
		Year						
<b>BASELINE CALCULATION</b>		2007	2008	2009	2010	2011	2012	Note
Electricity saved from the grid	MWh	0	0	7.922	17.037	13.700	11.564	Imported from Annex II
CO <sub>2</sub> emissions from electricity production	tCO <sub>2</sub>	0	0	7.502	15.470	12.111	9.633	
Company: Vez Svoghe J.S.C.: "Project Company"		Reference: HPP Svrjhen						
Efficiency Measure: Establishment of Hydro power plant								
		Year						
<b>PROJECT EMISSIONS</b>		2007	2008	2009	2010	2011	2012	Note
Annual electricity production from the HPP	MWh	0	0	0	0	0	0	
CO <sub>2</sub> emissions from electricity production	tCO <sub>2</sub>	0	0	0	0	0	0	
Company: Vez Svoghe J.S.C.: "Project Company"		Reference: HPP Svrjhen						
Efficiency Measure: Establishment of Hydro power plant								
		Year						
<b>EMISSIONS REDUCTION</b>		2007	2008	2009	2010	2011	2012	Note
Baseline scenario emission	tCO <sub>2</sub>	0	0	7.502	15.470	12.111	9.633	
Project scenario emission	tCO <sub>2</sub>	0	0	0	0	0	0	
Total project emission reduction	tCO <sub>2</sub>	0	0	7.502	15.470	12.111	9.633	Total crediting period 2008-2012= 44.715

<b>Company:</b> Vez Svoghe LTD: "Project Company"								<b>Reference:</b> HPP Tzerovo
<b>Efficiency Measure:</b> Establishment of Hydro power plant								
		Year						
<b>BASELINE CALCULATION</b>		2007	2008	2009	2010	2011	2012	Note
Electricity saved from the grid	MMh	0	0	0	0	0	4,716	Imported from Annex II
CO <sub>2</sub> emissions from electricity production	tCO <sub>2</sub>	0	0	0	0	0	3,928	
<b>Company:</b> Vez Svoghe LTD: "Project Company"								<b>Reference:</b> HPP Tzerovo
<b>Efficiency Measure:</b> Establishment of Hydro power plant								
		Year						
<b>PROJECT EMISSIONS</b>		2007	2008	2009	2010	2011	2012	Note
Annual electricity production from the HPP	MMh	0	0	0	0	0	0	
CO <sub>2</sub> emissions from electricity production	tCO <sub>2</sub>	0	0	0	0	0	0	
<b>Company:</b> Vez Svoghe LTD: "Project Company"								<b>Reference:</b> HPP Tzerovo
<b>Efficiency Measure:</b> Establishment of Hydro power plant								
		Year						
<b>EMISSIONS REDUCTION</b>		2007	2008	2009	2010	2011	2012	Note
Baseline scenario emission	tCO <sub>2</sub>	0	0	0	0	0	3,928	
Project scenario emission	tCO <sub>2</sub>	0	0	0	0	0	0	
Total project emission reduction	tCO <sub>2</sub>	0	0	0	0	0	3,928	Total crediting period 2008-2012= 3,928

Annex 4**CONFIRMATION OF THE EMISSION FACTOR IN 2012 FROM THE BULGARIAN  
MINISTRY OF ENVIRONMENT AND WATER**

**From:** Kiril Bankov [mailto:kbankov@moew.government.bg]  
**Sent:** martedì 6 novembre 2012 09:11  
**To:** Chiara DiSilvestro  
**Cc:** Milya Dimitrova; bnikolova@moew.government.bg; Patrick. Pauletto (patrick.pauletto@pvbgroup.bg); vassil.shumanov@pvbgroup.bg; krestian.kolev@pvbgroup.bg; Veneta Vladimirova Borikova  
**Subject:** Re: Emission factor 2012

Dear Chiara,

We confirm the value of the emission factor for 2012 listed in *Baseline Study of Joint Implementation projects in the Bulgarian energy sector*. The document has not been updated.

Best regards,  
Kiril

Kiril Bankov  
Expert  
International Emission Trading Mechanisms Department  
Climate Change Policy Directorate  
Ministry of Environment and Water  
Bulgaria  
Tel. + 359 2 940 60 78, Fax: + 359 2 981 81 07  
E-mail: [kbankov@moew.government.bg](mailto:kbankov@moew.government.bg)

On 5.11.2012 г. 12:37 ч., Chiara DiSilvestro wrote:

Dear all,

Since we are starting with the Verification process of our 9 HPPs on the River Iskar, I would be grateful if you would let me know the updated baseline grid emission factor for Bulgaria in order to calculate the Carbon Credits contracted.

For this reason I would like to ask you whether the document "**Baseline Study of Joint Implementation projects in the Bulgarian energy sector**" performed by NEK has been updated or, otherwise, if you can confirm the value quoted in it for 2012.

Thank you in advance for your collaboration,

Chiara



Chiara Di Silvestro  
Energy Project Engineer

Annex 5

**INDEPENDENT DOCUMENT OF THE MONITORING REPORT**

**Natsionalna elektricheska kompania  
“Baseline study of joint implementation projects in the bulgarian energy  
sector”  
Sofia**

**Latest document - 05.05.2005**

## 1. Introduction

Bulgaria complies with the requirements of the UN Framework Convention on Climate Changes (UNFCCC) ratified by the Bulgarian Parliament in March 1995. Besides, the Parliament of the country ratified the Kyoto Protocol to the Convention on 17<sup>th</sup> July 2002. The Protocol was based on the ideas and principles set forth in it and develop them further adding new obligations, larger in scope and detail than those in the Convention.

According to Art. 6 of the Kyoto Protocol, in order to perform its obligations for emission reduction and limitation, each of the countries listed in Annex 1 may transfer to another country on the list, or receive from it, emission reduction limits obtained as a result of projects for reduction of anthropogeneous emissions of greenhouse gases by sources. In practice, such projects are mostly implemented in countries with economies in the process of transition where there are more opportunities for emission reduction, and at a lower cost. The amounts of Emission Reduction Units achieved as results of the project may be bought by a developed country for the purpose of keeping its obligation under the Protocol.

In Bulgaria, joint implementation of projects is viewed as an economically acceptable way of reducing the emissions of anthropogeneous greenhouse gases and receiving, at the same time, financial, economic, technical assistance and expertise.

In order to start work by the so-called “flexible mechanism” under the Kyoto Protocol – Joint implementation (JP) Projects – a bilateral agreement has to be signed between the Government of Bulgaria and another developed country or an international fund for protection of the environment.

So far, bilateral Memoranda of Understanding and Bilateral Cooperation for implementation of JP Projects have been signed with the Kingdom of Netherlands, the Republic of Austria, the Kingdom of Denmark and EBRD in the latter’s capacity of trustee of a Prototype Carbon Fund.

## 2. Purpose of the Study

The purpose of the present assignment is to carry out a study in order to define the Baseline scenarios of the Bulgarian Electricity Power System and calculate the annual Basic Carbon Emission Factor (BCEF) of the Baseline in the process of operation of the electric power sector.

## 3. Introduction to the Baseline Study

The most important part of the preparation for a greenhouse gas reduction project is the Baseline Study. It should define, in a transparent and comprehensive manner, what rate of CO<sub>2eq</sub> reduction and related financing can be expected. Besides, the Baseline defines and provides the methodology of assessing which of several possible developments is the most probable in the absence of the project and what emissions would be generated by that scenario.

The Marrakesh Accords (the decisions of COP7 in Marrakesh in November 2001) constitute the central guidance as far as documents required by COP for climate protection projects are concerned.

According to the Marrakesh Accords, the Baseline shall meet the following more significant requirements:

1. To be transparent in terms of assumptions, method, project boundary, parameters, data sources, key factors and Additionality;

2. To account of important national and industrial policy measures and circumstances such as sector-related reforms, availability of indigenous fuels, plans for expansion of the electric power sector, and economic situation in the sector;
3. To be formed in such a manner that it would be impossible to generate ERUs and CERs for reduction of activities beyond the project boundary on the basis of Force Majeure events;
4. To be project-based or standard oriented;
5. To take data uncertainty into account. The assumptions shall be selected conservatively.

It means that the assumptions as to calculations in the event of hesitation (data range, data uncertainty, etc.) shall be selected in such a manner that the resulting total Baseline emissions would be low rather than high. As a result of that, the calculated emission reduction is underestimated rather than overestimated and is, therefore, more stable with respect to data status variations or with respect to criticism from outside. That increases the probability for the Baseline to be accepted by the validator and by the stakeholders.

6. Besides, the Baseline selection shall be substantiated.
7. There is a restriction upon the choice of a Baseline composition method for projects under CDM, but not for <sub>3</sub>JI projects. The following three Baseline approaches are possible only:

a) “historical or existing emissions”

That generally well sustained wording probably leaves room for all substantial Baseline methods because, in principle, every method can be supported by the argument that, directly or indirectly, it rests on historical or existing emissions.

b) “emission of a technology that, due to obstacles before investments, is an economically attractive alternative”

Practically, the purpose of that wording could be to extend the investment analysis method – an economically attractive alternative.

c) “the mean percentage of emissions from comparable project activities during the last five years implemented in similar social, economic, environmental and technological conditions, the project activities of which belong to the best 20% in their category”.

That last requirement may be interpreted to mean that JI/CDM projects should not lead to implementation of outdated technologies or used equipment, but to technological and social progress, that is, to sustainable development in the countries where they are implemented.

Beside these official requirements of the Marrakesh Accords, theoretically there are no other substantial directions restricting the Baseline development. This is to emphasize that, in the development of a Baseline, the question “What would happen to the system and its emissions if no financial resources came from Carbon Credit sales” has priority over adherence to preset criteria.

Although, in principle, individual routes may be chosen to the implementation of that task, the previous experience offers several already proven methodological approaches that should be favoured. Other routes should be chosen only where there are special reasons for that and where they are, respectively, adduced intelligibly by the author of the Baseline. Method selection

depends on the type of project, the data status, the preferences of Carbon Credit buyers, resp. the parties to the Contract, the Baseline author's experience, etc.

#### **4. Methodological Approaches to Baseline Determination**

The Baseline Determination Methodologies fall into two broad categories – project-specific approaches and multi-project approaches.

##### **1) Project-Specific Baseline**

###### **a) Reference Group**

From the point of view of a project specific Baseline, it is often emphasized that the type of project, its size and availability of data are the main factors that determine the choice of Baseline methodology.

The Reference Group approach requires finding of a similar country, region or project with conditions comparable to the particular project for the purpose of studying a development that does not include the Joint Implementation Project. The definition of a reference group in a similar situation in the electric power industry, would be difficult due to different circumstances with respect to fuels used, technologies implemented, economic aspects, electricity market liberalization status and policy, etc.

###### **b) Investment Analyses**

In these analyses, all probable and realistic possibilities are determined taking into account the technical, economic, political, social and environmental aspects graded by economic benefit, for example through determination of the Internal Rate of Return. The highest-return alternative is defined as Baseline Alternative. Due to the fact that economic aspects are the determining factors for that aspect, such approach requires a solution model guided mainly by economic considerations and the clear comparability of different options.

The potential for use of investment analysis in the electric power sector is quite limited because, in principle, the new projects compete with a variety of generation units in the electric power sector. It is very seldom that a new project competes directly with an existing unit. For that reason the investment approach is not considered very useful in the electric power sector.

###### **b) Scenario analysis**

Risk-based analyses deal with the possible development scenarios in the absence of a project taking into consideration various influencing factors such as technologies, policies and market restrictions. Possibilities leading to high risk are dismissed and the most probable scenario is selected as baseline. The main challenge in this approach is selecting the main influencing factors and to determine the best and most reliable data sources for the study.

##### **2) Standard-oriented, or Multi-project Baseline**

There are a number of different approaches to Multi-project Baselines. They can vary from average-emission specific emissions for a sector to technological standards of broad modeling within the frameworks of the particular sector such as, for example, merit order dispatch analysis in the electric power sector. In spite of the variety of approaches, the main point is to provide a set of standard data that shall be used as a baseline for a number of different projects. That can be also bases for comparison with respect to the baselines specific to a project and could be expressed in specific emissions per unit of electricity output (i.e., Basic Carbon Emission Factor /BCEF/ determined in tons of CO<sub>2</sub>/GWh).



The multi-project approach is launched because, through the use of such methods, the transaction costs of Joint-Implementation Projects will be significantly reduced. In other words, the baseline development costs in Joint-Implementation Projects will be much lower than those developed in countries that already have a Multi-project Baseline and, therefore, the project developers' and investors' costs will be significantly reduced. Therefore the present study will also launch a number of projects that will be implemented by means of these mechanisms, as it will launch implementation of smaller but environmentally friendly and stable energy projects as well. Besides, there will be better predictability to the project developer in terms of number of emission reduction units that will be achieved through a project.

More particularly, in the power plant case, the multi-project approach to a Baseline seems to be a reliable and efficient solution.

## **5. Multi-Project Baseline for the Electric Power Sector**

Considering the electric power sector, Multi-project Baselines find wide application in Joint-Implementation Projects and in Clean Development Mechanism Projects. The reason is that, in most cases, implementation of a project with capacity exceeding 20MWe, there is a marginal impact on the whole electric power sector. Therefore, project-specific Baselines are not suitable and multi-project approaches are preferred.

In the next section, an analysis of different Baseline methodologies based on multi-project approaches is made, and their compatibility with the subject of discussion is examined. Institutional conditions, available data and specificity of the Bulgarian electric power sector should also be taken into account when the most appropriate Baseline methodology is finally selected.

### **1) Mean specific emissions will all plants participating**

At present, this is the most simplified methodology for Baseline determination. It assumes that the project will displace part of the integral electricity generation mix. The problem with that method is that it encompasses all plants with low operating costs that usually operate as baseload plants, inclusive of hydro- and nuclear power plants. There is, however, almost no chance for a new investment to replace the output of these plants; it is much more probable for an investment to replace plants with higher operating costs such as plants fired with fossil fuel. Therefore, that methodology may be rejected by the investor countries because the share of nuclear generation added to that of hydro-power (about 50%) is large within the power system of Bulgaria.

### **2) Mean specific emissions less Nuclear, Pumped-Storage and Hydro-Power Plants**

In principle, there will be technologies that will continue to work irrespective of the adoption of a Joint-Implementation Project. The best example of that are the Chaira Pumped-Storage Hydro-Power Plant and the four large existing hydro-power cascades with hydro-power plants built downstream of the weirs that have extremely flexible load-following capacity and can operate in peak-load periods. That is not due to the high operating costs but rather to the opportunity offered by them to choose the time of electricity generation in the event of unexpected need for generation capacity in the system.

There is also a current trend in Baseline determination to eliminate the output of all nuclear and hydro-power plants because the low operating costs mean that their output will not be affected by new plants in the network. If NPP and HPP are eliminated from the Baseline, such assumption shall be supported by clear written records and justified.

Therefore, this approach attempts to consider matters related only to consideration of mean values in the system; however, precision here still remains questionable. The benefit of that approach is that it will yield the variety of all loads that will be replaced by the project; however, it will not yield the mean weighted value against the current (operating) costs.

### 3) Mean emissions for each Load Category

That involves load curve grouping into different load categories such as seasonal, peak, shoulder, and base loads. After determining the load profile of a project, a direct comparison to the same load category in the Baseline forecasts can be made.

### 4) Consideration of Solely Marginal Plants (Merit order dispatch Analysis)

The Least-Cost Method assumes that plants operating at the margin (at highest costs and, most probably, with highest emissions) will be the first to be replaced. The method should indicate the generation from each plant for every hour (or group of hours) within one year. The assumption is that commissioning of the new capacity will displace plants that currently operate at the end limit of the load curve. That analysis will require evaluation of the last unit(s) that should be connected, for every hour or group of hours in a year and, in that manner, the specific emissions per hour. That type of approach proves to be the most precise with respect to determining which unit actually stops generating electricity. The negative aspect is the quality and quantity of data needed for that method.

### 5) Operating Margin/Build Margin Methodology of IEA and OECD

OECD recommends to use the weighted mean between the operating margin and build margin for determination of the Baseline. That is based on the assumption that a Joint Implementation Project will very likely have an impact on the operation of an existing and new plant in the short term (marginal operating costs) as well as delay the implementation of a new plant in the longer term (marginal build costs). It will be possible to use a power sector model for forecasting of the build margin as well as of the operating margin.

## **6. Baseline Determination and Computation of the Carbon Emission Factor (CEF) Common to the Bulgarian Power Sector**

### 6.1. Mean specific emissions (all plants included)

The study enables determination of the mean specific emissions and the corresponding CEF for every plant and system-total. That analysis encompasses all power plants, inclusive of nuclear power plants and hydro-power plants that release no emissions but contribute power generation to the system. This approach is too imprecise to analyze CEF and, respectively, reduction of CO<sub>2</sub> emissions in a Joint-Implementation Project, because the operation of nuclear power plants and, to less extent, the operation of the four large hydro-power cascades of the power system are not influenced by the implementation of such projects.

### 6.2. Mean Specific Emissions (less NPP and HPP)

The study calculates and determines the mean specific emissions and the corresponding CEF for every plant and system-total, only excluding NPP and HPP from the calculation of Baseline emissions because they have low operating costs and, for that reason, there is not probability of their replacement. An option with starting up of the hydro-power cascades with HPP participating in the regulation of the system according to the above-mentioned calculations was developed for the event that a JP project hypothetically replaces peak-load hydro-power capacities of the system (HPP or gas-fired combined-cycle power plant over 20 MW).

That methodology can have quite extensive application in projects but still it remains a less refined methodology and is recommended only in cases of smaller-volume emission reductions in the sector. For example, when integration of JI projects with less than 200 MW installed capacity into the system is considered.

### 6.3. Mean Specific Emissions for Each Load Category

This approach is not considered in detail because it requires CEF determination for the overall power system. The approach does not add much to the two previous methodologies and it can be said again that it is a less refined approach and it does not reach far in determining what will actually be replaced by the new capacity.

### 6.4. Integrated Resource Planning (Least-Cost Planning Analysis)

Merit order dispatch analysis for the power sector indicates, in economic terms, what technologies or which particular generating units can be possibly replaced by a new generation in the network. That can provide a realistic picture of replacement, more specifically in the open electricity markets.

This method requires detailed information on the generating capacities and evaluation of the marginal units that shall be started up from a cold reserve state for every hour of the year. The power plants with guaranteed supply contracts shall be taken into consideration.

### 6.5. Operation Margin/Build Margin Methodology

This approach is a combination of marginal operating costs and marginal construction costs. It can be applied in countries where the power system capacities are expanding. The problem with this methodology is that it is difficult to determine the weighted mean between the Operation Margin and the Build Margin.

## 7. Selection of Baseline Study Methodology

Following the argumentation here above, the methodology used for Baseline Determination was developed on the basis of merit order dispatch analysis. This type of approach is considered the most precise for analysis which unit will be replaced by a new capacity.

The merit order dispatch approach analyses the electric power sector on the basis of electricity demand forecasts – minimum and maximum; fuel prices, new capacities and envisaged rehabilitation projects; and cost estimates. For these analyses NEK uses the IRP Manager computer model (Integrated Resource Planning Model).

The US software company Electric Power Software in Minneapolis has developed the software called IRP Manager for US institute EPRI. Since 1995 the model is implemented in the Bulgarian National Electricity Company for the least cost expansion planning of the power sector development.

The IRP-Manager model provides comprehensive management of demand, supply, financial and rate data needed for long-term integrated resource planning of the power sector. It coordinates an expansive “Tool Box” of capabilities including: chronological simulation of demand and resources, automated resource strategy development, decision analysis and complete forecasts of impacts from all perspectives.

The forecast power balances obtained by merit order dispatching are used to develop the Baseline study. The basis study itself was developed using the ACM0002 Methodology, “Consolidated Baseline Methodology for Grid-Connected Electricity Generation from Renewable Sources” of UNFCCC CDM – Executive Board.

In order that the study can be as complete as possible and applied to the widest possible range of JP projects in the Bulgarian power sector, all methods offered in the power plant operation margin determination methodology are applied. The relation between operation margin and build margin is assumed everywhere as 50/50 % for BCEF determination.

	Unit	2000	2001	2002	2003	2004		
1. Total system power generation	GWh	41 805	44 785	41 943	41 990	43 621		
2. Total system heat generation	MW <sub>th</sub> h	14 398 244	17 092 947	17 104 183	18 945 487	15 622 107		
3. Total CO2 emissions of power generation	kt/a	20 686,07	24 186,09	21 130,37	23 502,96	26 141,93		
4. Total CO2 emissions of energy transformation	kt/a	25 364,83	29 868,93	27 206,40	29 968,99	31 566,24		
<b>Baseline Emission Factor - BEF</b>								
Fossil Fuels								
1. Dispatch Data_OM_EF	tonne/MWh	1,215	1,287	1,214	1,226	1,199		
2. Dispatch Data Adjusted_OM_EF	tonne/MWh	1,159	1,222	1,150	1,160	1,138		
3. Average Dispatch Data_OM_EF	tonne/MWh	1,269	1,307	1,231	1,237	1,239		
HPP included								
1. Dispatch Data_OM_EF	tonne/MWh	1,144	1,184	1,106	1,160	1,165		
2. Dispatch Data Adjusted_OM_EF	tonne/MWh	1,065	1,106	1,032	1,067	1,078		
3. Average Dispatch Data_OM_EF	tonne/MWh	1,101	1,149	1,040	1,073	1,108		
Fossil Fuels								
1. Dispatch Data_OM_EF	kg/GJ	106,38	109,57	110,86	111,24	110,03		
2. Dispatch Data Adjusted_OM_EF	kg/GJ	106,93	109,05	110,68	111,09	109,91		
3. Average Dispatch Data_OM_EF	kg/GJ	109,43	108,79	109,00	109,47	110,63		
<b>Forecast</b>								
<b>Minimum demand</b>								
	Unit	2006	2007	2008	2009	2010	2011	2012
1. Total system power generation	GWh	45 051	43 115	44 156	47 490	48 212	51 139	52 291
2. Total system heat generation	MW <sub>th</sub> h	17 875 519	18 057 503	18 320 175	18 746 936	19 028 565	19 744 974	19 358 651
3. Total CO2 emissions of power generation	kt/a	28 035,37	31 810,38	31 245,76	33 538,31	33 547,47	33 863,20	31 248,73
4. Total CO2 emissions of energy transformation	kt/a	34 447,38	38 304,71	37 832,72	40 154,36	40 358,39	40 560,20	37 758,36
<b>Baseline Emission Factor - BEF</b>								
Fossil Fuels								
1. Dispatch Data_OM_EF	tonne/MWh	1,215	1,158	1,144	1,022	0,984	0,963	0,953
2. Dispatch Data Adjusted_OM_EF	tonne/MWh	1,154	1,100	1,078	0,956	0,917	0,902	0,899
3. Average Dispatch Data_OM_EF	tonne/MWh	1,243	1,190	1,146	1,026	0,986	0,974	0,983
HPP included								
1. Dispatch Data_OM_EF	tonne/MWh	1,176	1,175	1,110	0,995	0,959	0,940	0,918
2. Dispatch Data Adjusted_OM_EF	tonne/MWh	1,111	1,102	1,017	0,894	0,858	0,849	0,838
3. Average Dispatch Data_OM_EF	tonne/MWh	1,138	1,153	1,057	0,947	0,909	0,898	0,889
Fossil Fuels								
1. Dispatch Data_OM_EF	kg/GJ	111,997	106,693	106,484	100,340	97,288	95,088	96,152
2. Dispatch Data Adjusted_OM_EF	kg/GJ	111,976	106,621	106,402	100,566	97,871	95,946	96,570
3. Average Dispatch Data_OM_EF	kg/GJ	111,622	106,175	106,640	100,646	98,217	96,578	97,026
<b>Forecast</b>								
<b>Maximum demand</b>								
	Unit	2006	2007	2008	2009	2010	2011	2012
1. Total system power generation	GWh	46 739	43 572	46 588	48 351	49 455	51 368	53 194
2. Total system heat generation	MW <sub>th</sub> h	20 360 486	19 909 333	20 240 498	21 206 857	22 170 354	23 026 991	23 407 576
3. Total CO2 emissions of power generation	kt/a	27 152,04	31 508,75	32 821,32	33 044,62	33 387,00	32 807,31	30 531,04
4. Total CO2 emissions of energy transformation	kt/a	34 405,23	38 713,17	40 181,87	40 770,13	41 342,14	40 706,37	38 615,88
<b>Baseline Emission Factor - BEF</b>								
Fossil Fuels								
1. Dispatch Data_OM_EF	tCO2/MWh	1,204	1,215	1,124	1,014	0,973	0,947	0,884
2. Dispatch Data Adjusted_OM_EF	tCO2/MWh	1,143	1,156	1,059	0,947	0,908	0,884	0,833
3. Average Dispatch Data_OM_EF	tCO2/MWh	1,233	1,252	1,127	1,018	0,977	0,953	0,917
HPP included								
1. Dispatch Data_OM_EF	tCO2/MWh	1,158	1,168	1,101	0,990	0,947	0,928	0,865
2. Dispatch Data Adjusted_OM_EF	tCO2/MWh	1,091	1,095	1,006	0,888	0,850	0,834	0,791
3. Average Dispatch Data_OM_EF	tCO2/MWh	1,118	1,144	1,052	0,940	0,899	0,879	0,840
Fossil Fuels								
1. Dispatch Data_OM_EF	kg/GJ	109,651	111,991	105,315	100,011	95,929	94,604	93,043
2. Dispatch Data Adjusted_OM_EF	kg/GJ	109,571	111,876	105,263	100,226	96,498	95,130	93,524
3. Average Dispatch Data_OM_EF	kg/GJ	109,126	111,908	105,550	100,273	96,821	95,676	94,056

Annex 6

INTERNAL AUDIT REPORT (31<sup>ST</sup> OCTOBER 2012)

**INTERNAL AUDIT REPORT  
October 31<sup>st</sup> 2012**

**Sreden Iskar Cascade HPPs Portfolio Project  
Dated October 31<sup>st</sup> 2012**

**CONTENTS**

A. Audit Report

**Annexes**

Annex 1 - Internal Audit Check-list

## Background and Objectives of Audit Report

The procedure of internal auditing and control measures is included in the “Monitoring Plan”. This procedure has the purpose to describe the established system for the programming and execution of internal audits of the Monitoring Plan of Sreden Iskar Cascade Hydro Power Plants. The Internal Auditor must comply with the following requirements:

- He has to be trained by an Independent Company with proven expertise in developing PDD projects;
- He must be certified by an Independent Company as auditor;
- He must have participated to at least one audit as observer;
- He can't be the same person involved in the monitoring process.

## SECTION A. Audit Report

### A.1. Title of the project:

Sreden Iskar Cascade HPP Portfolio Project, September 2006 (“The Project”), Rev.1, dated 8 November 2006.

### A.2. JI registration number:

The project reference number is 0063.

### A.3. Short description of the project activity:

The project envisages the establishment of nine Hydro Power Plants (“HPPs”) on the river Iskar, about 40 km north of Sofia, with the overall objective to generate Emission Reduction Units (“ERUs”), reducing 370,970 tonnes of CO<sub>2</sub> equivalent in the period 2008 till 2012 (inclusive).

In year 2000, the Municipality of Svoghe carried out a feasibility study of the proposed HPPs. It attracted the interest of several energy companies that proposed to jointly develop the project with the city and in late 2003 the Municipality of Svoghe and Petrolvilla signed a Letter of Intent.

Based on the Memorandum of Understanding on co-operation between the Kingdom of the Netherlands and the Republic of Bulgaria in reducing emission of Greenhouse Gases (“GHGs”) under article 6 of the KP the proposed JI portfolio project aims at reducing GHGs by replacing electricity generated from fossil fuel with electricity generated from renewable hydraulic energy sources. Here below the project parties including the Carbon Credit purchaser, and the Project owner.

Party Involved	Legal entity project participant (as applicable)	Party involved wishes to be considered as project participant (Yes/No)
Bulgaria (Host Party)	Vež Svoghe AD Boulevard Christopher Columbus, 41 1592 Sofia, Bulgaria	No
Netherlands	EBRD (for the account of the Netherlands) One Exchange Square London EC2A 2JN, United Kingdom	No

**Table 6: Party involved**

Project Design Document (PDD) including baseline and monitoring plan has been prepared by engineering consulting company MWH S.p.A.. The Letter of Approvals (LoA) has been issued by the Ministry of the Environment of the Republic of Bulgaria on 22.12.2006 and by the designated focal point of the State of the Netherlands on 28.11.2007.

“Sreden Iskar Cascade Hydro Power Plants” project has been approved by an accredited independent entity (AEI) and has been granted final determination on 03.12.2007. PDD and Determination Report are available on the UNFCCC website under project reference number 0063.

**A.4. Date of internal audit of current year (2012)**

The internal audit was held on 31<sup>st</sup> October 2012.

**A.5. Personnel involved in the internal audit and responsibilities**

Plamen Dilkov attended the audit as internal auditor. Plamen Dilkov involved the following people:

- Vassil Shumanov;
- Marina Dimitrova, and;
- Anton Milchev.

**A.6. Methodology applied to the project activity**

The methodology applied to the project activity is included in the Monitoring Plan.

**A.7. Intended deviations or revisions to the procedure included in the Monitoring Plan**

No deviations or revisions to the procedure included in the Monitoring Plan have been done.

**A.8. Changes since last internal audit:**

No changes occur since last internal audit.

**A.9. Person(s) responsible for the preparation and submission of the Audit Report**

The person (s) responsible for the preparation and submission of the audit report are:

- Vassil Shumanov, Vez Svoghe
- Dario Dilucia La Perna, Consultant MWH

Annex 1

CHECK-LIST

<b>Auditor's Name(s):</b> Anton Mlchev <b>Company:</b> VEZ Svogha <b>Date of last internal audit:</b> <b>Date of current audit:</b> 31/10/2012 <b>List of people involved in:</b> Vassil Shumanov, Marina Dimitrova, Anton Mlchev <b>List of document which have been walked:</b> Monitoring Plan_II_Petrohilla_rev2, ANNEX II_MC_rev, ANNEX I_MP_rev, Invoices 2012			
Check-list		# Non conformities	Observed actions considered to resolve the non-conformities
<b>Non conformities of last internal audit</b>			
1	Have been the non-conformities of last internal audit sorted out?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
2	<i>If not, are some actions in progress to overcome the non-conformities?</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>Document</b>			
3	Are the paper copies of invoices to the Electricity Distributor properly stored?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
4	Is the folder "GHG emission reduction" available in the SCADA server?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
5	Does the folder "GHG emission reduction" contain:		
	<i>Monitoring plan-pdf format</i>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
	<i>Annex I-excel format</i>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
	<i>Annex II-excel format</i>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
	<i>Annex IV-scanned copy</i>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
	<i>Invoices-pdf format</i>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
6	Has the software adopted to store the data been changed?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
7	<i>If yes, is the new version consistent with previous one?</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	
<b>Operation of equipment</b>			
8	Has SCADA system properly worked till the date of internal audit?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
<b>Management</b>			
9	Are the persons and their responsibilities clearly defined?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
10	Is the instrumentation calibration plan properly applied?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
<b>Measuring and calculation procedure</b>			
11	Did the Engineer in charge of the monitoring process collect electronically on monthly basis the data generated by SCADA System?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
12	Are the data reported in the spreadsheet on monthly basis as for Annex II of Monitoring Plan?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
13	<i>If yes, are they in line with electricity invoices?</i>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
14	Are the read-off measurements coming from the electricity distributor reliable compared to those recorded by the SCADA System?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
15	Did the Engineer in charge of the monitoring process rectify the emission factor compared to previous year?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
16	<i>If yes, is it in line with new version of Document issued by the NEK?</i>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
17	Did the Engineer in charge of the monitoring process calculate the amount of CO2 emission reduction as for Annex I of Monitoring Plan?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
<b>Total number of non-conformities identified</b>		0	

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