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Submitted To:  
**USAID**



Proposal to Provide:  
**Technical Assistance  
in Support of the  
Southeast Europe  
Energy Efficiency Project**

Request for Competitive Task Order Proposal  
Under Contract No. LAG-I-00-98-00006-00

Submitted By:  
**BECHTEL NATIONAL, INC.**

**July 2000**

23865-233-104-0004 /



July 27, 2000

U.S. Agency for International Development  
M/OP/ENI/EEST  
Office of Procurement  
1300 Pennsylvania Avenue, N.W.  
Washington, D.C. 20523

Attention: Ms. Sheila Bumpass

Subject: Request for Competitive Task Order Proposal  
under Contract No. LAG-I-00-98-00004-00006-00  
dated July 10, 2000  
Southeast Europe Energy Efficiency Project

Dear Ms. Bumpass:

Bechtel National Inc. (Bechtel) is pleased to submit its proposal in response to the subject request. Bechtel has been part of the USAID-funded program of technical assistance to Eastern Europe since early 1992, including projects in Bosnia, Bulgaria, Romania, and Macedonia. Subject to your favorable consideration of our proposal, we are very much looking forward to continuing our activities in the region under this task order.

The Bechtel organization conducting USAID-sponsored and related similar work during previous years has been Bechtel Technology & Consulting (BTeC), a group under Bechtel National, Inc. Nexant, the Bechtel company that is focused on all aspects of the global energy industry, acquired some of these work contracts from Bechtel at the end of last year through a Master Asset Purchase Agreement. Since the Energy IQC is a Bechtel contract, we will continue as the prime contractor until such time as the requested contract novation to Nexant is approved by USAID. Nexant's employees and experience derive from BTeC, and it is the success of BTeC that has enabled the formation of Nexant, which will continue to perform and expand on this type of work. We would like to emphasize that the full resources of the Bechtel organization, more than 30,000 strong, remain and will continue to be available to complement Nexant staff on an as-needed basis on all of its projects. Our staff and experience proposed herein are referred to as Bechtel since they will currently be provided through our Energy IQC contract with USAID. We hope you share our excitement about this new development that clearly demonstrates our deepening commitment to the energy and environmental consulting business as a key growth area.

As communicated to you by e-mail last week, since the original transmittal of the RFP was sent to Matt Addison, our IQC Project Manager, at an incorrect e-mail address, we did not receive this RFP until Monday, July 17, 2000, over a week after it was issued to the two other competing IQC contractors. We have done our best in the time remaining to produce a

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**BECHTEL NATIONAL, INC.**

45 Fremont Street  
San Francisco, CA 94105-1895 USA

mailing address P.O. Box 193965  
San Francisco, CA 94105-1895 USA

proposal that meets all your requirements. Needless to say, we could have produced an even better proposal if given the extra week. Based on phone conversations between USAID and Matt Addison, we have not included a technical approach per se, as we were advised that this is not required for this submittal. Also per your e-mail, our cost estimate is not as detailed as would normally be the case for a Tier 3 cost proposal.

To conduct this work we have assembled an exceptional team of individuals with extensive experience in Eastern Europe. Our proposed project manager Mark Tribble was resident manager of the \$3 million energy efficiency task for a USAID project in Ukraine during the period 1996 to 1997. Since then, he was Chief of Party for the demand-side management component of USAID's EMCAT project in India, where he worked extensively with municipal governments to promote and develop energy efficiency programs, managed several demonstration projects, and developed projects for financing through IFI and commercial lenders. We propose Boris Petkov to provide key technical and engineering input to the project. Mr. Petkov has been with Bechtel for four years and is currently working on an ESCO-oriented energy efficiency project in Ukraine. He was born and educated in Bulgaria and has extensive energy efficiency experience in most countries of Southeast Europe. Bechtel's finance and project development staff will be headed by Damien Daly, who was a project finance executive at Moscow Narodny Bank and has extensive project development and finance experience in the region. The proposed finance staff also includes a Romanian and a Croatian, each with extensive relevant energy sector experience. Lea Swanson of the International Institute of Energy Conservation (IIEC) will manage training activities and advise on program development. Ms. Swanson was formerly USAID Senior Regional Environment Advisor for Europe and the New Independent States, with responsibility for the Southeastern Europe Cooperative Initiative and energy efficiency programs. Finally, our legal specialist will be Toma Georgiev of IVEL Consult. He is responsible for legal counseling, contracts, leases, and credit sale agreements on our UkrEsco job, and has performance contracting experience. He speaks Bulgarian, Macedonian, and Croatian, has project experience in Romania, and is exceptionally well qualified to be legal advisor in all the countries for this project.

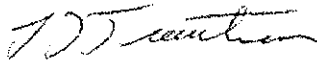
To provide local support we have obtained commitments from local firms in each of the countries where the proposed project plans its initial focus: Bulgaria, Croatia, FYRO Macedonia, and Romania. We have worked with several of these companies previously on our projects in the region, and have known the others for several years. The companies—and the countries where we propose to use them—include Ivel Consult (Bulgaria), Eco-Erg Technologie Service Ltd. (northern Romania), Energy Serv Ltd. (southern Romania), Energetic Association of Macedonia (FYRO Macedonia), and Ekonerg Holding Ltd. (Croatia). Each of these companies is a national leader in providing engineering, project evaluation, construction and, in some cases, financial services, focusing on district heating systems and/or energy efficiency projects in buildings and industry. Further details on each company and proposed personnel are provided in our proposal.

If you have any questions of a technical nature, please contact Matthew Addison at (202) 326-1610; contractual matters or commercial questions may be referred to Robert Gregg at (415) 768-9472.

Ms. Sheila Bumpass  
U.S. Agency for International Development  
July 27, 2000  
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We welcome the opportunity to be of assistance to USAID and organizations in Southeast Europe and would be pleased to respond to any questions you might have concerning our proposal.

Sincerely,



Lawrence J. Trautner  
Vice President & Manager of Operations

Enclosure: Proposal and Cost Estimate

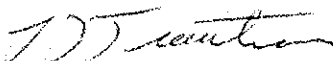
cc: Matthew Addison, Nexant, Washington, D.C.

USAID Request for Task Order Proposal  
Southeast Europe Energy Efficiency Project  
Bechtel Budgetary Cost Proposal, dated July 27, 2000

The following statements and certifications are provided in response to the above USAID Request for Task Order Proposal entitled Southeastern Europe Energy Efficiency Project:

- No Contingency Fees are included in the above referenced proposal.
- No Certificate of Procurement Integrity is being submitted at this time as there is no procurement of materials included in the present scope of work.
- ORGANIZATIONAL CONFLICTS OF INTEREST - DISCLOSURE OR REPRESENTATION - ADVISORY AND ASSISTANCE SERVICES (DEC 1994) (DEAR 952.209-70)  
In response to USAID Request for Task Proposal, Bechtel National, Inc. (Bechtel), located at 45 Fremont Street, San Francisco, California 94105-1895, (415) 768-1000, Taxpayer Identification Number 94-2452542, represents, to the best of its knowledge and belief, that the award to Bechtel of the above Task Order, does not involve an organizational conflict of interest.
- In reference to FAR 52.223-6 Drug-Free Workplace, I certify that Bechtel will comply with the requirements of the cited FAR clause.
- I certify that no USAID employee has recommended the use of an individual under the proposed Task Order who was not initially identified by the contractor's organization.

Name of Contractor: Bechtel National, Inc.

By:   
L. J. Trautner, Vice President, Operations

Date: 7/27/00

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## UNDERSTANDING OF THE PROJECT

The Southeast Europe Energy Efficiency (SEEE) task focuses upon a region that is still emerging from dramatic political change in the past decade, and requires significant infrastructure improvements even as energy and other costs are a severe burden on the finances of local and national governments. Energy efficiency investments in the public sector offer a double payoff: they improve the capacity and performance of the existing infrastructure, and by reducing government expenditures for energy, they allow improved provision of other essential services.

The critical focus of this project is the development of a market for municipal energy efficiency projects among commercial and IFI lenders, to address the vast need for improvements represented among the seven countries of the region. The generally poor financial condition of municipalities in the region adds to this challenge. However, IFI and commercial lenders have shown increasing interest in financing energy efficiency projects, as energy cost savings from the project can secure loan obligations even as the borrower may otherwise be a credit risk. Increased implementation of commercially financed energy efficiency investments in municipalities would be a significant boon to the region, establishing a record of good performance on loans that would attract further investment, and improving services to the population which would improve political stability in the region. On top of this, the replication potential for effective energy efficiency programs is significant in this region's pervasive and energy intensive public sector: the positive environmental impacts would also be substantial.

USAID, through the E&E Bureau and field missions, leads a broad array of energy efficiency-related activities in the Southeast Europe region in company with the IFI and donor community. This project will build upon efforts that have taken place in Romania, Bulgaria, and Macedonia, such as the Bulgaria Municipal Energy Efficiency Network. These efforts have made important progress toward improving institutional and private sector capacity to identify and im-

plement energy efficiency projects. This project will seek to develop and secure a strong linkage with commercial lenders to catalyze project finance, which has been a significant barrier to energy efficiency improvement.

## KEY FEATURES OF THE BECHTEL TEAM AND APPROACH

Based upon our understanding of the project and its objectives, we are confident that our team and staffing approach are unique, versatile, and targeted to meet the needs of the SEEE project. Key features are highlighted below:

- Our project team emphasizes experience in the Southeast Europe region—four staff members are nationals of the region—and project development, engineering, economic evaluation, public sector procurement, finance, and legal expertise developed primarily in Eastern European projects, supplemented by specialized expertise earned in other projects.
- Our management approach assigns key functional responsibilities to individuals with the most experience in the region, and proposes country teams, each including local energy engineering firms with whom we already have a relationship developed over previous or ongoing projects.
- We bring a banker's mentality to the task of developing projects and approaching lenders successfully. Our finance lead is a senior project finance professional whose professional history includes a senior position at Moscow Narodny Bank.
- We will start the project with a pipeline of bankable municipal energy efficiency projects based upon feasibility studies already prepared by our local partner engineering firms in each of the initial focus countries. This allows the project to gain a critical early start on project development activities and begin working tangibly with the financial community at an earlier stage.
- For each of the illustrative task approaches to develop municipal program options, we bring experience and ready project insights, with respect to municipal district heat sys-

tem project development on the Constanta model (previous district heat projects), development of national, public sector programs (coordination of government procurement requirements with EE project execution options), private ESCO development (ongoing programs including Ukraine), and financing mechanisms (assistance in Egypt).

- We bring demonstrated capability in all stages of energy efficiency project development from energy audit through prefeasibility, financing, design, procurement, construction, commissioning, and results tracking. Our experience and reputation in project management provides access to key officials among potential lenders and municipal leaders necessary for program development.
- Our approach to program design reflects understanding of local conditions, and is predicated upon using local personnel to provide key inputs about the marketplace, customer expectations and preferences, and organizational and cultural norms.
- We firmly believe in the importance of a strong local content to technical assistance, and have boosted USAID's recommended in-country labor level by 50% while remaining within the recommended budgets for total cost and expatriate professionals.
- The Bechtel team offers key links to support training activities such as creation of new AEE chapters, through our local subcontractors, several being Presidents of local chapters, and AEE's participation in Bechtel's Energy IQC team.
- Many of the tools required to implement the work scope have already been developed by Bechtel and its team members, including project financial models, model performance contracts, implementation agreements, and project savings verification protocols. This ensures that project resources are not expended on "re-inventing the wheel" and instead are devoted to adaptation, transfer, training, and implementation activities.
- Bechtel team strengths include: direct experience with the challenges of energy effi-

ciency project development in the region; experience developing and implementing energy efficiency program rollouts; experience developing innovative financing mechanisms, and in closing project finance packages; direct experience in ESCO business planning and project development; and experience adapting public sector procurement rules to ESCO opportunities, including Bechtel's own SuperESPC experience.

## MANAGEMENT PLAN AND ORGANIZATION

Our management approach for the SEEE project is based on the following principles:

- Achieve the overall E&E Bureau and Mission Strategic Objectives and all Intermediate Goals underlying the project
- Utilize to the greatest extent possible, local talent and resources, directly contributing to the capacity building goals of the project and instilling pragmatic measures for program development reflective of local conditions
- Retain the most cost-effective international expertise and resources for knowledge transfer and technical assistance activities

We are committed to providing the necessary corporate resources to this project, taking full advantage of the management and technical skills gained through many energy management projects and our extensive network of business links within the region.

## Project Organization

The project organization chart (Figure 1-1) outlines the key relationships between project staff, USAID, and other stakeholders in the project, including prospective lenders, municipal authorities and energy service providers. The Project Manager (PM) will have overall responsibility for management of this IQC task order, directing execution of all work in compliance with the technical and commercial requirements of the contract and of each activity. He will provide technical leadership to all project activities, with emphasis on the technology investment



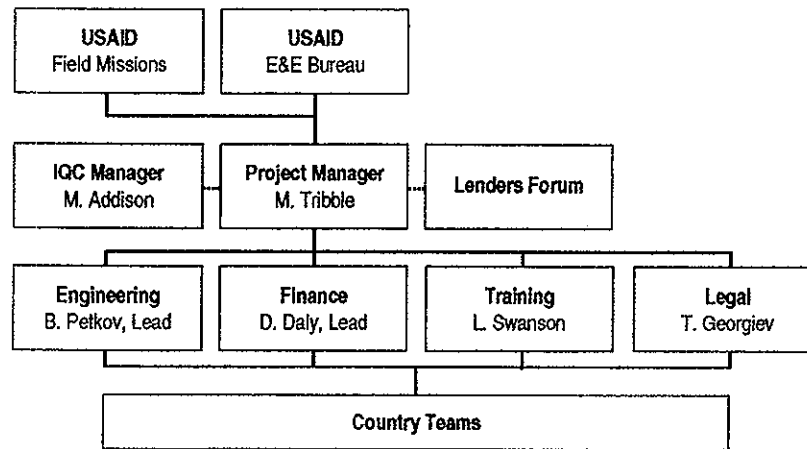


Figure 1.1 Organization Chart

aspects, and will direct project planning, task implementation, and project evaluation. The PM will work closely with USAID—including the E&E Bureau and relevant Missions in the region—and with the Bechtel members, municipal counterparts, lenders and other stakeholders to ensure effective planning and coordination of all project activities. He will coordinate with Bechtel international and domestic offices to staff tasks and to obtain information that will assist in broadening our perspective for planning activities. The PM will interact directly with Bechtel’s IQC Manager on all contractual matters.

The organization structure of the project team shows functional leadership over distinct country teams. USAID has indicated that the work under the SEEE project may take shape in the form of between one and four distinct program areas, at least one program rollout, and a sixth regional task to include training, capacity building, and legislative initiatives. Bechtel has responded to the uncertainty about program scope by adopting a team approach with sufficient skill breadth to cover all the potential program areas, drawing from designated experts as required. The country team approach assures that appropriate local expertise to customize programs to particular countries, and demonstrates sufficient skill depth to allow unconstrained, concurrent program implementation in

multiple countries. The functional roles and team compositions are described in detail in the following section on staffing.

The organizational approach also features an approach premised on a partnering relationship with USAID and local stakeholders. Initially, the PM and key advisors from the project team will work closely with the E&E Bureau and the USAID missions to advance the ongoing discussion about program approaches, to develop a program plan for each country within funding constraints. The PM will be responsible for maintaining the partnering relationship between USAID (missions and E&E Bureau) and local stakeholders for each country program that is developed, throughout the life of the program.

Recognizing the importance of the financial sector to this project, we propose to form a lenders working committee composed of leading national and regional banks, IFIs, and banks from neighboring countries. This lenders committee will serve several purposes: increase the exposure of leading members of the financial community to the market potential for EE lending in the municipal sector; provide ongoing advice to guide program development activities; and provide a conduit through which EE project sponsors (through SEEE support) may gain access to lenders for project financing. We propose that the lenders committee meet on a quarterly

basis for the first year of the project. Thereafter, the scheduling of lender meetings will be determined based on the continuing value and need in achieving project goals.

### **PROJECT MOBILIZATION, MONITORING AND REPORTING**

Within 10 days of task order award, the PM will meet with USAID E&E Bureau to discuss the initial implementation plan, and be ready to travel immediately to the Southeast Europe region to meet with USAID country missions. The result of these meetings will be the detailed work plan, describing all activities and tasks, milestones and deliverables, and identifying any project implementation issues and proposing solutions for overcoming them. The detailed work plan will be submitted to USAID within 30 days of the commencement of project activities.

Quarterly reports will be prepared and submitted to USAID that will contain brief progress reports on each program area, milestones achieved, progress towards achieving other milestones, and budget status. An important component of the quarterly report will also be a description of any variance from expected results, as well as any recommendations needed on revising project strategies to ensure future success. Project reviews will also accompany the quarterly reports.

At the end of the first year, a workplan for the final year of the project will be prepared and submitted to USAID for each program area. The workplan will describe expected activities, objectives and approach, budget allocation, and expansions of program areas into other countries from those selected for the first year.

At the conclusion of the project, a final report will be prepared and submitted to USAID. This report will contain a detailed description of administrative and technical activities, tasks, and results. The emphasis of this report will be on lessons learned in the project.

### **STAFFING: ROLES AND RESPONSIBILITIES**

Bechtel has assembled its project team in an organization of key functional leads, a pool of experts to be deployed according to the demands of the program areas selected by USAID, and local experts in each country. Task assignments, including the range of potential program areas, are indicated in Figure 1-2. A further matrix of staff to skill areas and geographic experience is provided in Appendix B, along with CVs.

#### **Project Manager**

**Mark Tribble** is proposed as PM. Mr. Tribble recently completed a 3-year assignment as Chief of Party for USAID's EMCAT/DSM program in India. Prior to that, he was resident manager of a \$3 million energy efficiency program for USAID in Ukraine. Mr. Tribble understands the business conditions of Eastern Europe well and has an excellent performance history with USAID. He has developed municipal energy efficiency programs in India and the US. In India, he was instrumental in promoting the development of commercial relationships between municipalities, State Electricity Boards, and IFIs, leading to the implementation of numerous municipal energy efficiency projects. He has also proven to be adept at identifying bankable energy efficiency projects and finding innovative approaches to financing them. Mr. Tribble is currently 100 percent available for the SEEE project, and is prepared to initiate project activities immediately upon award. He is located in Bechtel's Washington office, in close proximity to facilitate interaction with USAID E&E Bureau.

#### **Energy Engineering**

**Boris Petkov** will lead engineering and project evaluation activities. Mr. Petkov is currently Bechtel's manager of the UkrEsco project in Ukraine, responsible for supervision of investment grade energy audits in district heating networks and industrial plants, due diligence required for project finance of equipment upgrade and rehabilitation of systems, negotiations of energy performance contracts (EPC's), procurement and implementation of energy effi-

ciency projects, energy savings monitoring and verification. Mr. Petkov is Bulgarian, and has

Miljenko Bradaric will lead the project engineering, evaluation and development activities

Core Team	Affiliation	Primary Role	Task Assignments					
			Commercial Demonstration Projects	Public Sector Facility Programs	Private ESCO Project Financing	Regional Financing Mechanisms	Rollout of Municipal Programs	Training, Institutional, Legislative Assistance
Mark Tribble	Bechtel	Project Manager	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Boris Petkov	Bechtel	Engineering	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
Damien Daly	Bechtel	Finance		<input type="checkbox"/>		<input checked="" type="checkbox"/>		
Lea Swanson	IIEC	Training	<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>	<input checked="" type="checkbox"/>
Toma Georgiev	IVEL	Legal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Eugenia Patrinoche	Bechtel	Finance (Romania)					<input type="checkbox"/>	
Miljenko Bradaric	Bechtel	Engineering/ Finance (Croatia)	<input type="checkbox"/>					
Robert Hinkle	Bechtel	ESCO Dev.			<input type="checkbox"/>	<input type="checkbox"/>		
Brian Wood	Bechtel	Public Programs		<input type="checkbox"/>			<input type="checkbox"/>	
Jonathan Foord	Bechtel	Finance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Local Consultants		Project Eval. & Implementation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Key Responsibility     Involved

Figure 1.2 Staff Roles and Responsibilities

worked throughout Southeast Europe, Central and Eastern Europe, and FSU countries to develop and implement energy efficiency projects for the past 9 years, including 6 years with Bechtel. In Southeast Europe, he has worked in Bulgaria, FYR Macedonia, Romania, and Albania. Mr. Petkov's lead role will be in the development and evaluation of bankable energy efficiency projects, and supervision of local contractors in these and related activities. Mr. Petkov has worked previously with most of the contractors on the Bechtel team. From January 2001 through the end of the year, Mr. Petkov will be based in London and have 30 to 40 percent of his time available for the SEEE project, assuming an expected extension is approved for the UkrEsco project. In the second year of the project, he will be 100 percent available.

in Croatia when activities begin there. He is Croatian, and has over 19 years of experience in the energy sector, consulting on subjects that include energy efficiency, tariff analysis, and power system planning. He was recently a task leader for a Phare study on improving competitiveness of the electricity market in the Balkan region. He has worked throughout the Central and Eastern Europe region in technical, financial analysis, and project development roles. Mr. Bradaric is based in San Francisco, and is 100 percent available for the SEEE project.

While we do not anticipate needing further expatriate engineering staff resources, particularly given the exceptional resources of local subcontractors on our team, Nexant also has additional

consultant resources available with experience in the Southeast Europe region.

### Finance and Development

**Damien Daly** will lead finance-related activities. Mr. Daly is an expert in project finance, with experience in developing innovative financial strategies and closing financial deals for a wide variety of energy infrastructure projects for private clients, the European Community, Phare program, commercial lenders, IFIs, and others. He was a project finance executive at Moscow Narodny Bank, and has developed financing schemes for many projects in the Eastern Europe region. Mr. Daly will lead the program to develop regional financial mechanisms for energy efficiency projects, and provide strategic advice to financial aspects of other programs as needed. He is based in London, and is 100 percent available for the SEEE project.

Other staff experts proposed with an emphasis on finance and project or program development skills include Robert Hinkle, Eugenia Patrniche, Jonathan Foord, and Brian Wood. Their potential roles and responsibilities are differentiated below.

**Robert Hinkle** will support program efforts that emphasize creation of regional financing mechanisms or country programs oriented to private ESCO project financing. Mr. Hinkle is currently providing technical assistance on the development of EE projects to local energy service providers and financial institutions in Egypt. He has evaluated the creation of a special purpose investment vehicle that will serve as a dedicated source of financing EE projects. Mr. Hinkle has also developed a business strategy for a natural gas distribution company to provide integrated energy services to industrial end-users (including the financing and development of EE projects). He has also established linkages between the financial community and Egyptian energy service providers with the objective of creating a pipeline of bankable EE projects. Mr. Hinkle has previously developed a financial model for evaluation of projects in a USAID project in Romania. Mr. Hinkle will be 100 percent available for the SEEE project be-

ginning in January 2001, when he will relocate from Cairo to San Francisco.

**Eugenia Patrniche** will support program efforts that emphasize project financial evaluation and administrative design elements of a program rollout, especially in Romania. Ms. Patrniche is Romanian, and has ten years of experience in development of financial models and business plans, investment analysis and market assessment in Central and Eastern European and FSU countries. She is based in London and is 100 percent available for the SEEE project.

**Jonathan Foord** is a Chartered Accountant with extensive experience in project financial modeling, prefeasibility assessments, and business planning, in Central European and FSU countries, including Romania. He is currently the finance and accounting expert for the UkrEsco project in Ukraine, evaluating energy efficiency investments in the context of performance contracting. Mr. Foord is proposed as project finance specialist for one of the country teams. He is based in London and is 70 percent available for the SEEE project.

**Brian Wood** will support development of public sector energy efficiency programs. Recently, Mr. Wood completed a project to adapt government procurement guidelines to stimulate energy efficiency investment through performance contracting by universities and public hospitals in Thailand. He is also developing business for Bechtel as a Super ESPC contractor for federal facilities in the US. Mr. Wood developed an energy efficiency program in the city of Alexandria, Egypt, including demonstration projects, while managing a \$2 million DSM program for USAID under the ECEP project. Mr. Wood is based in San Francisco, and is 100 percent available for the SEEE project.

### Training

**Lea Swanson**, Director of IIEC-Europe, will lead training and institutional strengthening activities of the SEEE project. Ms. Swanson has extensive experience in the region, as she was until recently USAID's Senior Environmental Advisor for Europe and the New Independent States,

managing USAID regional initiatives such as Ecolinks, and providing support to field missions. Early in the project, Ms. Swanson will be available to assist the PM in working with the USAID field missions toward definition and development of country programs. Later, her efforts will focus on training, institutional strengthening, lender coordination, and potential input to legislative initiatives, as needed.

## Legal

Toma Georgiev, of IVEL Consult, will be responsible for legal counsel, contracts, solicitations, leases, and performance contracting. Mr. Georgiev currently has similar responsibilities working under contract to Bechtel in the UkrEsco project. He has extensive experience in the development and negotiation of contracts for investment grade energy audits, for implementation of energy efficiency projects in Bulgaria, FYR Macedonia, and Ukraine. Mr. Georgiev developed and negotiated lease contracts as well as credit sale agreements for ESCO type projects and represented an ESCO in arbitration. Since 1996, he has been continuously involved with legal consulting work and training support to energy efficiency programs funded by the EC and EBRD. Mr. Georgiev is a fluent speaker of Bulgarian, Macedonian, and Croatian, and has conducted projects in Romania as well. Mr. Georgiev is based in Bulgaria and is available for the SEEE project.

## Country Teams

Bechtel proposes to assemble specific project sub-teams as programs are initiated in each country. This approach is intended to facilitate simultaneous implementation of the country programs. Figure 1-3 illustrates the distribution of proposed teams.

Mr. Tribble will be closely involved in each country team. Each team includes a local subcontractor and selected Bechtel staff in key skill areas. The Bechtel personnel assignments for the finance and program development roles are fluid, depending on the type of program selected for the country. Importantly, the figure

identifies the local subcontractors associated with each country.

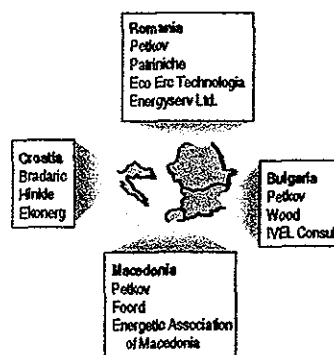


Figure 1.3 Country Teams

## PROJECT SCHEDULE

An illustrative project schedule indicating task timing and milestone activities is presented in Section 5. It is illustrative in that the program areas described by USAID are illustrative and subject to funding availability and agreement with USAID missions.

## PAST PERFORMANCE AND CORPORATE EXPERIENCE

Bechtel has assembled an exceptionally well qualified project team to augment our own substantial expertise developed in the southeast Europe region and elsewhere. The team includes IIEC-Europe, which has managed several innovative energy efficiency activities aimed at municipalities for USAID, and five firms that are leaders in energy efficiency project development in their countries: IVEL Consult (Bulgaria), Eco Erg Technologie Service Ltd (northern Romania), Energy Serv Ltd (southern Romania), Energetic Association of Macedonia (FYRO Macedonia), and Ekonerg Holding Ltd (Croatia). Figure 1-4 provides a summary of relevant experience for each member of the Bechtel team. A table of references for selected projects is provided at the end of the Bechtel past performance section.

Representative Project Experience	Project Development	Engineering/Financial Evaluation	Public Sector EE & DSM Programs	ESCO Development	Program and Project Implementation	Financial Mechanisms	Training	Institutional Development	Legislative/Policy Development	Bulgaria	Croatia	FYRO Macedonia	Romania	Other SE Europe	Other Europe and FSU	Other Developing Countries
<b>Bechtel</b>																
Ukresco	■	■		■	■	■	■	■							■	
Energy Conservation and Commercialization Project	■	■	■	■	■	■	■	■	■							■
National Energy Efficiency Strategy		■	■	■		■	■	■	■							■
Moving Markets for Energy Efficiency		■		■			■	■								■
Pakistan ESCO Capabilities Assessment	■	■		■												■
EE Procurement in Thailand			■	■		■		■	■							■
Feasibility of Increased EE in Kazakhstan			■	■											■	
Kommunar EE Market Development	■	■						■							■	
ECEP	■	■	■	■	■	■	■	■								■
Trnava District Heating Plant	■	■											■			
Bucharest District Heating Project	■	■													■	
Regulatory Reform & Restructuring in CEE & Baltics	■	■					■	■	■	■		■	■	■	■	
Eastern European Regional Energy Efficiency Project	■	■					■	■	■	■		■	■	■		
Competitive Balkan Electricity Market								■	■	■		■	■			
Diversification of Balkans Gas Supply								■	■	■		■	■	■		
<b>IIEC-Europe</b>																
Romanian Energy Cities Network	■					■	■					■				
Eco-Efficiency Management							■	■	■						■	
Twinning for Change						■		■	■			■			■	
UNFCCC Country Study Projects		■				■		■	■						■	
ESCO/EE Development in Romania	■		■	■								■				
<b>IVEL Consult</b>	■	■	■	■	■		■		■					■	■	
<b>Eco Erg Technologie Service Ltd</b>	■	■		■	■		■					■				
<b>Energyserv Ltd</b>	■	■		■								■				
<b>Energetic Association of Macedonia</b>	■	■		■		■					■					
<b>Ekonerg</b>	■	■		■							■					

Figure 1.4 Past Performance

## **Bechtel Experience and Past Performance**

Bechtel has managed some of USAID's most ambitious efforts in energy and environmental development assistance, such as the \$67 million Energy Conservation and Environment Project in Egypt, and the \$18 million Regulatory Reform and Energy Sector Restructuring Project in Central and Eastern Europe and the Baltics. Bechtel has also conducted numerous projects in Eastern and Southeastern Europe under EBRD's TACIS and Phare programs, including two cited below for the Black Sea Regional Energy Center, as well as for other clients. We are proud to have developed a reputation for successful implementation on projects that translate policy interests into local capabilities and market change.

Bechtel presents summaries below for a wide range of projects, including rapid-response assignments and complex long-term projects with resident advisor positions, equipment procurement, integrated training, and performance measurement. The selection of energy efficiency projects comprises a global scope representing experience in key skill areas relevant to this project, including project evaluation and development, public sector procurement and program development, ESCOs, financial development, and program rollout and implementation. In addition, we present a variety of projects conducted in the Southeast Europe region, demonstrating our familiarity with the represented countries, their institutions in the energy sector, and business practices.

### ***Bechtel Energy Efficiency Projects***

**ESCO Development in Ukraine (UkrEsco), EBRD TACIS.** The Bechtel/TPF Econoler Joint Venture is providing technical and project management services in an initial 2-year period to establish an ESCO in Ukraine (UkrEsco). The unique financial arrangements include a \$30 million long-term loan from EBRD, guaranteed by the Ukraine Government, to capitalize the ESCO and fund its startup, and a \$6.6 million grant to fund both consultant assistance and a

financial incentive for clients that sign performance contracts.

Bechtel's role is to launch UkrEsco activities, develop a viable project portfolio, generate target energy savings and shareholder returns, and ensure transfer of capabilities to Ukrainian staff to support privatization of UkrEsco. Bechtel and the Project Management Unit (PMU) have developed a pipeline of clients and built capacity among Ukrainian staff to perform industrial energy audits and offer turnkey project development services, including measurement and verification of energy savings. Several energy efficiency projects have been completed and others are in progress, and the project is on track to deliver on promised energy savings and shareholder returns. Bechtel's role has been critical to the success of the project, and the consultant services contract is in the process of extension to the end of 2001.

**Energy Conservation and Commercialization (ECO) Project/USAID India.** The 4-year ECO project is designed to create and demonstrate market-based approaches for implementing energy efficiency projects, by systematically addressing the market and policy barriers that have limited the implementation of energy efficiency practices in India. Project activities will include providing policy and regulatory assistance at the national and state level. Additional services will include project facilitation through due diligence and technical/financial advisory support, utility demand-side management, energy efficiency program implementation, project financing, and institutional development and training. Project finances are being leveraged through direct project support using the ECO fund, joint private and public sector undertakings, and increased lending by multi-lateral development banks

**National Energy Efficiency Strategy Development/USAID Egypt.** Under USAID/Egypt's Egyptian Environmental Policy Program, Nexant is providing technical support toward the development of a national energy efficiency strategy in a 1-year, \$3.8 million project. Through training, team building, organization/work process redesign, and information

system development, Nexant is strengthening capabilities of stakeholders and organizations leading key task forces for energy efficiency finance, appliance efficiency standards, building efficiency codes, energy database integration, technology deployment, and policy analysis toward developing a policy reform agenda.

**Moving Markets for Energy Efficiency/USAID Global.** Nexant is evaluating the difficulties experienced in the growth of energy efficiency markets in developing countries, in a \$2 million, 2-year effort that focuses on India, Egypt, and Brazil.

This project focuses on market, institutional, and policy assessment through a variety of techniques, and subsequent efforts to promote public-private partnerships to implement market-based strategies in the target countries. To support market promotion activities, Nexant is developing "best practices" guidebooks, case studies, decision frameworks, and other resource materials for government policy-makers, regulators, financial institutions, utilities, and private sector entrepreneurs.

**Energy Efficiency Procurement in the Thailand Education Sector/World Bank.** Nexant conducted a pilot program to develop, test, and demonstrate a standardized procurement/management process and standard bidding documentation for energy efficient end-uses in public universities in Thailand through performance-based contracts. The project adapted the conventional government procurement process, to bundle together services required for the entire energy efficiency project cycle: preliminary and investment grade energy audits, equipment procurement and installation, ongoing maintenance, and monitoring of actual energy savings.

**Feasibility Assessment of Support for Increased Energy Efficiency in Kazakhstan/USAID CAR.** Nexant conducted a study in Kazakhstan of market and institutional dynamics as they relate to the development of commercially oriented and sustainable markets for energy efficiency technologies and services. Nexant developed a strategy and action plan for

USAID activities to overcome constraints to energy efficiency, featuring technical and managerial capacity building with respect to efficient energy use, accelerated deployment of metering technologies, and establishment of information exchange mechanisms.

**Energy Efficient Product Manufacturing Development at IA Kommunar (USAID/Ukraine).** Nexant is assisting a major Ukrainian military industrial plant, Industrial Association Kommunar, to develop new business lines in energy efficiency products. After assessment of existing production capabilities for opportunities to modify toward nonmilitary production, Nexant and IA Kommunar focused on water and electric meters. Nexant has assisted in the preparation of production feasibility studies, investment requirements, market analysis, assessment of certification requirements for ISO 9001, a draft business plan, and a sales and marketing plan.

**Energy Conservation and Environment Project (ECEP), USAID/Egypt.** Nexant was prime contractor for the 8-year, \$67 million ECEP, which demonstrated and promoted energy efficient technologies and practices in industry. Highlights include:

- *Technology Demonstrations.* Performed EPC of 30 major demonstration projects in industry, resulting in over \$40 million in savings, and hundreds of energy audits and feasibility studies.
- *Technical Training.* Nexant managed training of over 10,000 engineers and managers in energy efficient technologies, auditing, and project development.
- *Technology Promotion.* The promotion and outreach program included publication of over 100 manuals and periodicals, study tours, a monthly program of workshops and promotional seminars, and international conferences.
- *Sustainable Energy Service Business Development.* Assisted counterpart agencies and other private companies to develop sustainable energy service businesses, through business plan development, management training, and other activities.



- **ESCO Market Development.** Nexant founded and organized the Egyptian Energy Service Business Association (EESBA), to provide a network for energy efficiency business development and removal of market barriers.
- **DSM Pilot Program.** Nexant developed and managed a pilot DSM program that included: energy audits and project implementations; establishment of DSM cells in three distribution companies, market assessments, an electric motors efficiency testing program, and cogeneration market development.

**Pakistan ESCO Capabilities Assessment/World Bank.** Nexant prepared a feasibility assessment of the ESCO/performance contracting approach to realizing energy efficiency in Pakistan. The principal project elements included institutional assessment, energy efficiency potential assessment, and ESCO assessment.

**Reconstruction of the Trnava District Heating Plant – USTDA.** Bechtel developed a conceptual design, cost analyses, and financial evaluations for the near-term reconstruction, modernization, efficiency increase, potential reduction of emissions, and potential addition of new or replacement capacity for the Trnava Heating Plant. The study was conducted for the Western Slovak Energy Authority (ZSE) and was funded by a grant from the USTDA.

**Bucharest District Heating Project – USTDA.** Bechtel evaluated the technical and economic feasibility of improving the Bucharest District Heating System (DHS) by increasing the thermal energy delivered, increasing equipment availability and efficiency, and reducing SO<sub>x</sub> and NO<sub>x</sub> emissions wherever possible. The study covered near-term plant rehabilitation, modernization, and plant additions to supply satisfactory amounts of thermal energy until new capacity can be brought on line. The study examined five cogeneration power plants, owned and operated by the Romanian Electricity Authority (RENEL), which supplies thermal energy to the DHS.

## ***Bechtel Southeast Europe and Other Regional Projects***

**Development of a Competitive Balkan Electricity Market/EC Phare.** This study is assisting in the development of a regional electricity market in the Balkan region operating under UCPT standards. The project is identifying the constraints on greater integration; assessing alternative models and recommendations for the most appropriate one for the regional electricity market; and developing an action plan for the creation of such a market. The study is led by Bechtel Consulting's London Office under contract to the Black Sea Regional Energy Centre, which acts as agent for the EC.

**Diversification of Gas Supply in Albania, Bosnia-Herzegovina, Bulgaria, FYRO Macedonia, and Romania/EC Phare.** Bechtel conducted a 1-year study of options for gas supply diversification in these five Balkan countries, in a project funded by Phare and administered by the EC's Black Sea Regional Energy Center. Bechtel's project team included pipeline and LNG terminal engineers, gas economics specialists, and teams of local consultants in each of the five countries. The project team examined prospects for growth in the gas sectors of beneficiary and neighboring countries, including Croatia, in the context of which their current supply arrangements might be developed to diminish their substantial dependence on one supplier, Russia. The Black Sea Regional Energy Center has been promoting the findings of the project.

**Regulatory Reform and Energy Sector Restructuring in Central and Eastern Europe and the Baltics, USAID.** For this \$12 million, 3 ½ -year project, Bechtel provided technical advisory services, training and research in the areas of regulatory reform, energy sector restructuring and transition policy. Activities in Southeast European countries included:

- Romanian Power Sector Restructuring.
- CENTREL Regional Regulatory Assistance Plan.
- Electricity and District Heating Tariffs for Bulgaria.

- Electricity Tariffs and Coal Prices in Bosnia-Herzegovina.
- Pilot Commercialization of Brasov Power Distribution Subsidiary, Romania.
- Regulatory Assistance in Romania.

**Eastern European Regional Energy Efficiency Project/Electric Power, USAID.** This project comprised a broad range of technical and management assistance, training, and other services to the electric power sectors in Central and Eastern European countries. Activities in Southeast European countries included:

- Bulgaria Least-Cost Planning Integration.
- Generating System Efficiency Improvement in Romania.
- Macedonia Power Sector Restructuring Options Evaluation.
- Safety Improvement Program for Kozloduy 3 & 4 in Bulgaria.

**Bulgaria Power Sector Least-Cost Planning.** Bechtel provided a commercial model for integrated resource planning, developed the power system database, and delivered a series of in-depth training programs to establish strong planning capabilities at NEK and CoE. The model provided under this assistance program, IRP Manager, continues to serve as a key tool for least-cost planning at NEK

**Energy Technology Innovation Project (ETIP).** Bechtel was prime contractor for this 6-year, \$10 million project for USAID. Selected activities included the following:

- *Four Cities Natural Gas Distribution Systems Rehabilitation (Russia).* Bechtel conducted a technical, economic, and financial assessment of the gas distribution systems in four selected Russian cities. This effort served as the basis for approximately \$70 million in World Bank loans aimed at increasing end-use efficiency.
- *Pre-Loan Assessment of Hrazdan Unit 5.* Bechtel conducted an assessment of the design and construction status of this partially built 300 MW oil/gas-fired power station. The actions, cost and time requirements

needed for completion were identified. The assessment was critical to the eventual EBRD approval for a \$60 million loan to complete this critically needed power source.

**USIJI Program Assistance.** Nexant conducted independent reviews of numerous Joint Implementation (JI) project proposals, to evaluate measures to reduce or sequester greenhouse gas emissions and develop data and methodologies for establishing a baseline of current and future GHG emissions. In Southeast Europe, one such project evaluation was for a hydroelectric power project in Bulgaria.

### *Bechtel Project References*

Development and Operation of a Ukraine Energy Services Company	The European Commission, Tacis Programme DG 1A Rue d'Arion 88, 2/19 B-1040 Brussels	Willy de Groe Tel: 32 2 296 0220 Fax: 32 2 296 33 77 Email: willy.de-groe@cec.eu.int
Diversification of Gas Supply in the Balkan Region	Black Sea Regional Energy Centre 8 Triaditsa St 1040 Sofia, Bulgaria	Dr. Lulin Radulov Director Tel: 359 2 9806854 Fax: 359 2 9806855 Email: ec-synkk@bsrec.bg
National Energy Efficiency Strategy (NEES)	USAID/Egypt	Alan Davis Director, Office of Environment Tel: 20-2-516-5505 email: adavis@usaid.gov
Energy Conservation and Environment Project (ECEP)	USAID/Egypt	James Goggin Project Officer USAID/CAR Almaty, Kazakhstan email: jgoggin@usaid.gov
Energy sector Regulatory Reform and Restructuring in Central and Eastern Europe and the Baltics	USAID/ENI	Dr. Robert F. Ichord, Jr. Chief, EE/EEST/EI USAID Tel. 202 712-1352 Fax 202 216-3389 e-mail: richord@usaid.gov

## IIEC - Europe

The European office of the International Institute for Energy Conservation, IIEC – Europe Ltd., has an extensive experience base in South-eastern Europe in energy efficiency financing, energy efficiency management strategies, policies and practices, ESCO/energy efficiency market development, raising public and NGO awareness and involvement in energy conservation, promoting programs, institutions and investments for sustainable energy alternatives. Their involvement in energy efficiency includes the following key projects:

**Energy Efficiency Financing in Economies in Transition (OECD) – Southeastern Europe, Central Eastern Europe, Newly Independent States.** Included a review of international financing institutions and their support for energy efficiency.

**Capacity building project (EU Phare) to strengthen the Romanian Energy Cities Network (Orase Energie Romania, OER)** and to facilitate the development and financing of municipal energy projects.

**Project to develop eco-efficiency management strategies, policies and practices (U.K. Charity Know How)** together with the municipality of Plovdiv, Bulgaria, to be used as a model for other municipalities in Bulgaria.

**Project on "Twinning for Change"** (EU Phare) involving Romania, Poland, Hungary, Austria, Netherlands and U.K. This program was designed to increase participant understanding of a broad range of financing options and approaches for energy efficiency projects and to initiate the first steps in applying these options in practice.

**Market assessments on energy efficiency in the public and municipal sectors, U.S. Committee on Energy Efficiency, Commerce and Trade (COEECT)** sponsored project in Romania, Poland and Hungary to undertake.

**ESCO/Energy Efficiency Market Development U.S. Committee on Energy Efficiency, Commerce and Trade (COEECT)** sponsored project

focusing on performance contracting for the provision of energy services in hospitals, schools, other public buildings and street lighting.

## IVEL Consult

IvelConsult Limited is a Bulgarian consulting firm offering premier engineering, architectural, and legal services to Bulgarian and international clients in industry, government, development banking, and the international donor community. IvelConsult has been working on energy efficiency projects with the world's leading energy consulting firms on every aspect of energy system planning and development, energy audits, energy efficiency project implementation, including project management, engineering, procurement, legal, and training programs. Relevant projects by IvelConsult include:

- Ukraine: Development and Operation of a Ukrainian Energy Service Company, Client: EBRD/Bechtel/Nexant (ongoing)
- Bulgaria: Energy Efficiency Programme for Bulgarian Telecommunication Company's Office Buildings in the towns of Plovdiv, Smolyan, Chepelare and Devin, Client: BTC (1999)
- Bulgaria: The Energy Efficiency Program (EEP), Client: USAID/Electrotek (1998-1999)
- Bulgaria: Energy Efficiency Program for the Bulgaria Hotel in Plovdiv, Client: Star Plovdiv Limited owners of the Bulgaria Hotel (1997)
- Bulgaria: Trimontsium Hotel in Plovdiv, Client: Trimontsium (1995-1996)
- Bulgaria Energy Efficiency Project, USAID (1993-1995)

## S.C. Eco-Erg Technologie Service Ltd.

S.C. Eco-Erg Technologie Service is an energy consulting company based in Napoca, Romania, offering a full range of energy services with expertise in providing turn - key energy efficiency solutions, energy audits, pre-feasibility and feasibility studies including performance contracting, project and design management, supervi-

sion of installations (acting as turn-key general contractor), training of operators, and saving verifications, for own project and for equipment vendors.

S.C. Eco-Erg's services emphasise customers' energy specific consumption reduction, organization and maintenance of costs reduction, money saving verifications, financial resources identifications for energy efficiency solutions implementation, network of complementary companies for projects implementations, and performance contracts promotion. S.C. Eco-Erg's customers include petrochemical plants, pharmaceutical plants, cement factories, cosmetics plants, metallurgical plants, paper plants, food industry, wood industry, institutional customers (hospital and schools), and hotels rehabilitation. Representative projects include:

- Borsa Rehabilitation Hospital: energy audit, thermal system rehabilitation, and energy saving measures implementation (partly funded by USAID).
- S.C. Intertaxi S. A. Cluj: feasibility study for space heating system
- S.C. Romcim S.A. Alesd, Bihor: study and turn-key installation of thermal energy system rehabilitation
- Telecommunication High School, Baia Mare: turn-key installation of building envelope improvements including insulation
- Sighetu Marmatiei City Hospital: thermal and electric energy audit
- Tg. Mures and Ludus Dairy Plants (funded under EU Phare Synergy): energy audit

### **Energyserv Ltd**

Energyserv Ltd is a private energy consultancy located in Bucharest, Romania. Principal capabilities include procurement of heat and power equipment, energy auditing, energy system evaluation and financial analysis of energy efficiency projects. Principals in the firm have managed the following representative projects:

- Rehabilitation projects including 5 generation plants and 4 T&D projects at RENEL, including finance negotiation with World

Bank, EBRD, European Investment Bank, EC-Phare, and Japan Exim Bank.

- Energy audit, financing, and implementation services for energy efficiency projects in numerous industrial plants

### **Energetic Association of Macedonia**

Energetic Association of Macedonia was formed in 1992, to provide consultancy services and sponsor meetings, workshops, and symposiums to advance development of the Macedonian energy sector on subjects including energy efficiency, energy delivery, and environmental protection. Principal members of the firm include a former manager of the Skopje steel mill (the country's largest energy consumer) and director of the Skopje district heat company. Representative experience includes the following:

- Diversification of Gas Supply in the Balkans (EC Phare under subcontract to Bechtel)
- State Economic Plan for the Energy Sector to 2020
- Troplifikacija AD energy efficiency opportunity studies and feasibility studies for plant rehabilitation (Skopje district heat company)
- RZS-Skopje Reconstruction of Heat Plant
- Waste Heat Recovery Feasibility Study, Skopje Iron & Steel Works
- District Heating System improvements study at Makedonska Kantenika

### **Ekonerg Holding Ltd.**

Ekonerg Holding Ltd. is a consulting engineering company located in Croatia, with principal areas of expertise that include: analysis and planning of energy systems; environmental studies; analysis and optimisation of centralised heating systems, natural gas supply systems, thermal and gas networks; studies, preliminary design and rationalisation of industrial and energy processes; energy management; supervision of construction works, organisation and management of start-up; and other activities. Typical projects include:

- Energy supplying orientation of the city and area of Zagreb by the year 2000, Optimal geometry of basic hot water and gas network
- Consulting on complex energy supplying orientation of the city of Sarajevo
- Consulting on complex energy supplying orientation of the city of Skopje
- District heating distribution of Slavonski Brod by the year 2000
- Heat energy supplying distribution of Vukovar and residential area Borovo by the year 2000
- Heat energy supplying orientation of the city of Zavidovići by the year 2000
- Heat energy supplying orientation of the city of Sisak
- Heat energy supplying of Zagreb from NE Prevlaka, part II
- Conceptual design of heat distribution from NE Prevlaka to DH Zagreb
- Justification on connecting the heat consumers of residential areas Gajnice, Prečko and

Furthermore, EKONERG has been engaged in several projects supported by World Bank, including *District Heating Operation Plan in the Republic of Croatia from 2000 to 2025 (Master Plan)*, in collaboration with MVV, Mannheim, Germany. EKONERG has made numerous energy efficiency project feasibility studies and consulting services for ESCO projects (for the purposes of Hrvatska elektroprivreda)

CVS OF KEY PERSONNEL

We have assembled an outstanding team for the USAID/Southeast Europe Energy Efficiency Task Order. These individuals combine extensive technical expertise in energy efficiency and related disciplines, along with years of experience working in developing regions. We selected personnel having the following key attributes:

- Previous demonstrated success in managing and implementing EE programs and projects.
- Experience in the Southeast Europe region, or Central and Eastern Europe or FSU regions.

- Clearly recognized by their peers for their technical excellence, team leadership skills and abilities as consensus-builders in the European energy sector.
- Understanding of institutional issues, needs, and constraints of participating stakeholders.

Figure 2-1 summarizes the experience of the Bechtel team.

Biodata sheets for proposed CCN personnel are included at the end of this section.

Core Team	Affiliation	Primary Role	Geographic Experience		Skill Areas									
			SE Europe	Other CE, EE, FSU	Other Developing Countries	Project Development	Project Engineering	Project Financial Evaluation	Public Sector Procurement	ESCO Development	Finance	Training	Legal	
Mark Tribble	Bechtel	Project Manager	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑
Boris Peikov	Bechtel	Eng. Lead	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑
Damien Daly	Bechtel	Finance Lead	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑
Lea Swanson	IIEC	Training Lead	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑
Toma Georgiev	IIVEL	Legal Lead	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑
Eugenia Patrinoche	Bechtel	Finance (Romania)	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑
Miljenko Bradaric	Bechtel	Engineering/ Finance (Croatia)	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑
Robert Hinkle	Bechtel	ESCO Dev.	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑
Brian Wood	Bechtel	Public Programs	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑
Jonathan Foard	Bechtel	Finance	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑
I. Velkov	IIVEL	Bulgarian Team	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑
L. Lazarov	IIVEL	Bulgarian Team	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑
V. Grasin	EcoErg	N. Romania Team	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑
G. Padureanu	EcoErg	N. Romania Team	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑
B. Bobu	EnergyServ	S. Romania Team	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑
D. Catalin	EnergyServ	S. Romania Team	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑
A. Tomoski	Energetica Macedonia	Macedonia Team	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑
G. Kacorkov	Energetica Macedonia	Macedonia Team	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑
D. Hadick Misez	Energetica Macedonia	Macedonia Team	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑
N. Hladia	Ekoneg	Croatia Team	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑
Z. Komericki	Ekoneg	Croatia Team	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑

Figure 2.1 Personnel Experience Matrix

**BECHTEL PERSONNEL****MARK TRIBBLE—PROJECT MANAGER****Key Qualifications**

Mr. Tribble has over 10 years experience in managing and executing energy efficiency and DSM projects throughout the world, including Ukraine, India, and North America. He has extensive experience in promoting the role of energy efficiency in sectors undergoing restructuring, including modeling the financial and operational benefits of energy efficiency promotion. He also has extensive experience working with municipalities to implement and finance energy efficiency projects. He is experienced in implementing practical and appropriate programs, and performing tariff, economic, and financial analyses.

Mr. Tribble recently finished a three-year assignment in New Delhi, as the Chief of Party, for the USAID funded Demand Side Management Energy Management Consultation and Training Project (EMCAT). He worked extensively with the Indian counterparts - both governmental and private sector - to institutionalize the work being funded under EMCAT. Throughout the life of the project he was able to build crucial inter-ministerial consensus concerning important energy efficiency policy decisions.

Mr. Tribble worked closely with municipal governments to promote energy efficiency at the local level. He promoted the use of multilateral lending facilities to help develop more commercially viable projects utilizing organizations such as ESCOs. During the life of the project, a municipal pumping concept to commission project was completed

His experience also includes management of a \$3 million energy efficiency project in Ukraine. He facilitated a DSM bidding program and integrated demand management into the planning activities of the distribution companies. The DSM and energy efficiency activities were carried out under a larger program, funded by a World Bank loan, for the restructuring of the Ukrainian electricity system.

**Education**

M.A. Economics, New Mexico State University, 1989  
B.A. Economics (minor in Business), University of Tennessee, 1985

**Experience**

**2000 - Present. Nexant (a Bechtel technology and consulting company).** Serves as a senior consultant focusing on issues related to electric industry restructuring, working on projects in Asia, Europe and North America.

**1997 - 1999. International Resources Group.** Served as the director responsible for managing a major energy efficiency technical assistance program in New Delhi and for promoting energy efficiency in India's electricity sector. His assignment included:

- Working with state authorities to integrate the role of energy efficiency in restructuring the SEBs.
- Working with municipal governments, which were targeted due the disproportionate cost of electricity in relation to their overall budget. SEBs were encouraged to establish commercial relationships with the municipalities in order to implement energy efficiency projects. Multilateral lending institutions were also solicited to promote the commercial viability of municipal oriented energy efficiency projects. ESCOs and equipment dealers acting as ESCOs were encouraged to develop commercially viable projects with Municipalities.
- Working with several State Regulatory Commissions and with the Central Electricity Regulatory Commission (CERC).
- Helping build load research capability in several SEBs.
- Assisting several SEBs with first rate case filings to the newly formed regulatory commissions.
- Establishing energy efficiency (DSM) cells in two states.

- Incorporating distribution and energy efficiency planning into the reform process.
- Providing high-level guidance to the government on the implications of centrally mandated electricity reform programs for implementing energy efficiency programs in SEBs; setting up energy efficiency cells; promoting rational tariff design; designing energy efficient distribution systems; reducing commercial and technical losses; and promoting customer relations and end-use efficiency.

1995 - 1997. **Hagler Bailly Consulting.** Project manager on a \$3 million energy efficiency project in Ukraine. Facilitated a DSM bidding program and integrated the role of demand management into the distribution companies. Also integrated a demand side bidding system into a market based tariff system complete with active pool price trading throughout Ukraine.

Responsible for various consulting projects in the utility, energy, and natural resources sectors—including energy conservation, regulatory litigation support, integrated resource planning, and tariffs.

1992 - 1994. **Boston Edison.** Selected and managed vendors to evaluate the effectiveness of alternative DSM programs; tracked cost effectiveness, deliverable timeliness and quality. Developed and maintained cost recovery models for the recovery of the \$55 million annual cost of the company's DSM expenditure programs.

1990 - 1992. **El Paso Electric Company.** Responsible for preparing long- and short-term projections of the company's income, balance sheet, and cash flow statements. Managed and administered fuel related compliance filings to state regulatory bodies. Developed and maintained computer based fuel recovery and performance standard models.

1990. **U.S. Census Bureau.** Developed and managed self-enumeration strategy for southern New Mexico.

1989. **New Mexico State University.** Lectured non-business majors in economics.

1985 - 1987. **United States Peace Corps.** Helped small-scale fish farmers in Kenya develop low-cost, high-yield, fish farming techniques and provided administrative assistance to local businesses and farmers



**BORIS V. PETKOV—ENERGY ENGINEERING LEAD****Key Qualifications**

Mr. Petkov is an EE expert who has worked to develop and implement EE projects in Central and Eastern Europe as well as in the Former Soviet Union countries for the past 9 years. He has extensive experience in the development of EE projects through marketing and screening of proposals, investment grade energy auditing, client due diligence, procurement and implementation of EE projects, and energy related programs in Bulgaria, FYR Macedonia, Romania, Hungary, Czech Republic, Russia, and Ukraine.

Since 1993, he has been continuously involved with technical and training support to EE programs funded by USAID, the EC, and the European Bank for Reconstruction and Development (EBRD). He has focused on EMS for district heating schemes and industry as well as development and demonstration of the ESCO mechanism as an effective and profitable vehicle for energy efficiency in transition economies.

**Education**

M.B.A., International Management Program, Exeter University, 1995-1996

C.E.M., Association of Energy Engineers, 1993

M.S., Electrical Engineering, University of Food Technology, Bulgaria, 1990

**Experience**

2000 - Present. Nexant (a Bechtel technology and consulting company). Deputy team leader, EC/EBRD project, *Development and Operation of a Ukrainian Energy Service Company (UkrEsco)*. Responsible for Nexant and UkrEsco team supervising and/or conducting investment grade energy audit; due diligence in respect of provision of project finance for industrial energy equipment upgrade and rehabilitation; negotiations of energy performance contracts (EPCs); procurement and implementation of EE projects; energy savings monitoring and verification.

Regular liaison and collaboration with staff of the EC Tacis Program and the EBRD.

1996 - 1999. Bechtel Limited (Bechtel Consulting). Deputy team leader, EC/EBRD project, *Development and Operation of a Ukrainian Energy Service Company (UkrEsco)*. Responsible for the negotiations between the JV Econoler/Bechtel and UkrEsco to finalize a collateral contract for advisory services; establishment of UkrEsco, procurement of energy auditing equipment, recruitment of UkrEsco's staff, development of marketing and promotional strategy for UkrEsco, assessment of the business environment; marketing and business development for UkrEsco; training to UkrEsco staff in project management, procurement, investment grade auditing and client due diligence.

Earlier, as an energy efficiency specialist, worked on feasibility studies for power and energy efficiency projects in Eastern Europe. Major contributions to the following projects (between 1996 and 1999):

- Development of a competitive Balkan electricity market
- Diversification of gas supply in the Balkans
- Technology for energy recovery at gas pressure reduction stations, the Russian Federation
- Pre-investment study on clean coal technology application, Czech Republic

1994 - 1995. Ivel Limited, Consulting Department (Bulgaria). Director and senior associate providing engineering, procurement, and energy efficiency consulting for hotels, hospitals, copper mines, and various industrial plants.

1993 - 1994. RCG, Hagler Bailly USAID Project Team. Consultant responsible for preparing energy efficiency audits, specified equipment in industrial enterprises in Bulgaria.

1991 - 1992. Globe Meat (Denmark). Responsible for the electrical and control systems on 5,000 tonne cold storage construction project.

1990 - 1991. Ivel Limited (Bulgaria). Engineer responsible for the control systems design and project management for HVAC and refrigeration systems.

**DAMIEN DALY—FINANCE LEAD****Key Qualifications**

Mr. Daly has extensive financial and technical experience in energy related project financing, and an in-depth knowledge of the power and energy industry. He has broad experience throughout Eastern Europe, including the Czech Republic, Russia, and Ukraine, and is a member of the

Ukrainian Energy Services Company (UkrESCO) team.

**Education**

M.B.A., Cranfield School of Management

Diploma in Mechanical Engineering, Trinity College (Dublin)

B.Sc., Civil Engineering, University College (Cork)

**Experience**

- 1992 - Present. Nexant (a Bechtel technology and consulting company) and Bechtel Consulting. As a project development consultant, provides strategic and economics consulting services to enable development of new business opportunities. Responsible for appraising concepts and structuring technical and financial resources to carry proposals through to project implementation. Specific assignments include:
    - Preparing financing strategies for major projects
    - Co-authoring a pre-investment study for \$600 million Phare project in the Czech Republic
    - Documenting joint venture proposals in the United Arab Emirates between U.K. engineering company and international aerospace group
    - Advising oil company on development proposals for new field development in Sakhalin region
  - Negotiating European Community funding for Middle East projects under ECIP framework, in conjunction with leading merchant banks
  - Structuring an oil export and trading joint venture
- 1989 - 1992. Narodny Bank, Moscow. Project finance executive responsible for advising on the project structuring and financing in the energy, manufacturing, and resource sectors. Projects included:
- Oil and gas production joint venture between British Gas, Gulf Resources, and ArticKominest
  - Baikal aluminum smelter involving Kaiser Aluminum
  - Military conversion for Bryansk truck plant
  - Plywood production with Finnish joint venture partners
  - Feasibility study work for establishing a venture capital fund for Russia
- 1985 - 1989. Petrofina, S.A. Project economist responsible for developing project analysis capability of the regional head office. Responsibilities included:
- Developing feasibility studies
  - Preparing project analyses to quantify funding requirements
  - Presenting proposals to potential joint venture partners and investors
- 1981 - 1985. Partec-Lavalin. Project engineer responsible for supervising all onsite engineering staff. Prepared incremental economic studies. Responsible for major elements of the project management function for substantial engineering, procurement, and construction contracts in Canada.
- 1978 - 1981. Sisk. Chief engineer responsible for managing onsite engineering on a number of projects in Europe.

**EUGENIA PATRINICHE—FINANCIAL ANALYST****Key Qualifications**

Eugenia Patrniche has over 10 years experience in economic and financial modeling in energy and industrial sectors in centrally planned and transition economies. She has broad experience in Eastern Europe, including Hungary, Romania, and Russia. Ms. Patrniche has conducted investment appraisal training seminars and carried out market/competitor assessments for energy utilities and industrial sectors, and developed restructuring options based on sector/business assessments. She has also conducted a number of financial analysis and developed business plans for new energy investments.

**Education**

M.B.A., Finance, City University Business School (London), 1994

Studies in Environmental Management, Ecole Nationale des Ponts et Chaussees (Paris), 1992

M.Sc., Power Engineering, University Politehnica (Bucharest), 1984

**Experience**

1994 - Present. Nexant (a Bechtel technology and consulting company) and Bechtel Consulting. Economics and strategy consultant to international energy and petrochemical companies, governments, and financial institutions. Undertaken economic analysis, investment appraisal, and project management on the following projects:

- Restructuring of Astrakhan Gas Processing Plant, including downstream options and economic and financial appraisal of expansion project
  - Competitor analysis of international water sector. Analyses of commercial and strategic position
  - Economic and financial modeling, defining investment options, and sector analysis for restructuring of Romanian downstream petroleum sector
  - Project management and market studies to establish a quality assurance center in Yekaterinburg, Russia for oilfield equipment manufacturers
  - Feasibility study, including economic and financial modeling, for LNG export project for power generation in Korea
  - Business plan and investment appraisal, including economic and financial modeling, for petrochemical export project from Uzbekistan
  - Support and analysis on major petrochemical based industrial zone for Abu Dhabi—Ruwais Master Plan. Industries included cracker, ethylene/propylene, aromatics, and methane
1994. Société Générale. Analyst responsible for developing and implementing application for forecasting banking income generated by corporate banking activities and a complementary income sensitivity analysis.
- 1990 - 1992. University Politehnica, Bucharest, Department of Hydraulics. As assistant professor, conducted research on water infiltration in earth dams.
- 1988 - 1992. Research Institute for Hydraulics, Bucharest. As research engineer, conducted applied research programs on underground water pollution and mitigation of environmental risks for thermal power plants.
- 1984 - 1988. Institute for Power Engineering Design, Bucharest. Design engineer, responsible for project and quality control assessments of hydrotechnical developments for Cernavoda nuclear plant.
- Economic and life cycle cost analyses for Qatar Vinyl Company, assessment of the value drivers and key project sensitivities
  - Assessment of incentives and penalties scheme for Reliance Jamnagar Refinery
  - Investment planning and scheduling for rehabilitating and modernizing Norski refinery, Russia
  - Economic analysis of LNG/Oil/Coal fuelled power generation projects in India

**MILJENKO BRADARIC—ENERGY ENGINEER****Key Qualifications**

Mr. Bradaric has 19 years of experience in the energy and electric power industries. He has extensive experience in energy efficiency, market research, and tariff and power system planning, with a strong focus on Eastern Europe. During his career, he has conducted a number of power system planning, load analysis, and feasibility consulting assignments for governments and utilities around the world. In addition, he has significant investment and financial analysis experience in the sector. He is the author of numerous study reports and papers on energy and power systems, and is fluent in English and Croatian, with a working knowledge of Macedonian and Bulgarian.

**Education**

M.S., Electrical Engineering, University of Zagreb, Croatia, 1987

B.S., Electrical Engineering, University of Zagreb, Croatia, 1980

**Experience**

1991 - Present. Nexant (a Bechtel technology and consulting company) and Bechtel Consulting. Responsible for power system restructuring, pricing, and planning areas. His experience includes:

- *Regulatory Reform and Energy Sector Restructuring in Central and Eastern Europe and the Baltics (USAID)*—country manager for Lithuania, providing technical assistance on energy pricing, planning, and organizational issues to the Lithuanian National Control Commission for Energy Resources and Activities. Scope includes: analysis of power and district heating system operations; development of energy pricing methodologies for electricity, district heating, and gas; introduction of new regulatory practices and guidelines; and specification and procurement of equipment (1996-2000).
- *Balkan Electricity Market Study (EU)*—task leader assisting the development of a regional electricity market in the Balkans, providing mechanisms (legislative, technical, financial, institutional) for market liberalization and establishment of new market structure and institutions (1999).
- *Power Market Study for Southern Africa (Shell, ESKOM, Nampower)*—power system modeling task leader for the least-cost planning and power market study. Utilized power system analysis software to model Southern African regional power system and develop 20-year generation and transmission expansion plan that included load management and energy efficiency projects under a variety of assumptions and sensitivity cases (1998).
- *Baltic Regional Power System Planning Project (USAID)*—task leader in evaluating and selecting load forecasting and power system planning and pricing software. Conducted training courses for planners from the three Baltic utilities, and assisted in developing national and regional least-cost planning studies (1995-1996).
- *Coal and Thermal Power Cost Study for Bosnia and Herzegovina (USAID)*—work included inspecting coal power plants and selected coal mines; comparing cost data with international experience; developing cost models for the mining and power sector; and recommending energy saving measures and adjustment of coal and electricity prices to reflect economic cost (1997).
- *Tariff Study for Bulgaria (USAID)*—performed tariff and restructuring work for the Bulgarian Ministry of Energy, including training Bulgarian experts, reviewing tariff structure, and conducting generation expansion, rehabilitation, and marginal cost analyses (1996)
- *Least-Cost Planning Study (Douglas County PUD)*—work for Douglas County, a municipal utility in the U.S., included development of a least-cost plan by evaluating alternative supply side resources, purchase options as well as cost-effective DSM programs (1995-1996).

- *Belarus Tariff Study (EBRD)*—performed power system expansion planning, district heating system evaluation, and pricing analysis of the Belarus energy and power system for the study conducted to support the EBRD loan for the new combined cycle project (1994-1995).
- *Planning Model and Case Study for Bulgaria (USAID)*—worked on evaluation and selection of power system planning software for the Bulgarian national utility. Assisted in demonstrating various planning models, and conducted training course and a case study in least-cost resource planning (1993-1994).
- *Slovakia Restructuring and Tariff Study (USAID)*—conducted training course and case study in resource planning and electricity pricing for Slovakia. Work addressed training and software needs for the least-cost planning and integration of planning capabilities into corporate activities (1992-1993).
- *Power Complex Rehabilitation Study for Bulgaria (USTDA)*—performed technical and economic analysis of different power system rehabilitation options, compared rehabilitation options with new projects and various fuel supply options (1992-1993).

for the energy and electric power sector in Croatia. Work led to solutions of problems such as operation and integration of district heating power plants, planning and reliability of power systems, and integration of transmission and generation planning.

1990 - 1991. Electric Power Research Institute (EPRI). Assessed the economic and technical benefits of integrating the distributed systems and demand-side options into electric power transmission and distribution systems. Also evaluated the impacts of advanced power supply options (e.g., fuel cells) on distribution systems, taking into account generating capacity, T&D capacity, energy, and environmental cost/benefits.

In addition, evaluated EPRI-developed state-of-the-art methods for power system planning and operations and evaluated different approaches for representing power system data with the unified database management system.

1981 - 1990. Institute for the Electric Power Industry (Zagreb). Developed analytical techniques and conducted a number of feasibility and planning studies

**ROBERT HINKLE—FINANCIAL ANALYST****Key Qualifications**

Mr. Hinkle has extensive management consulting experience in the energy sector, including the development of business strategies for private sector companies to deliver energy efficiency (EE) services, evaluation of special purpose investment vehicles for EE projects, advising commercial banks and leasing companies on the development of bankable EE projects, discounted cash flow analysis of a wide range of energy sector investments, and the preparation of national EE strategies for developing countries.

Mr. Hinkle has assessed and helped implement electric sector restructuring and regulatory reform as part of multidisciplinary USAID international consulting teams in Romania. He conducted detailed financial analysis, which facilitated the completion of economic and policy assessments.

He has also assessed strategic options for energy sector organizations in Central and Eastern Europe, Northern Africa, South America, Southeast Asia, and the United States.

**Education**

M.A., International Business and Economics, The Fletcher School of International Law and Diplomacy (Tufts University), 1996

B.A., International Politics and Economics; and German, Middlebury College, 1991

**Experience**

1996 - Present. Nexant (a Bechtel technology and consulting company) and Bechtel Consulting. As a consultant for Nexant, evaluates of EE investment strategies, creation of EE markets in developing countries, electric utility restructuring, and financial analysis of energy sector projects.

Currently leading a USAID-funded task in Egypt to provide technical assistance to the local financial community on the development of EE projects. Assisting commercial banks, leasing companies, equity

funds, and energy service providers in the evaluation of the local market for EE. Also recently evaluated the creation of a special-purpose financing vehicle for EE projects in Egypt. To help develop a pipeline of EE projects, also established a working group of representatives from local financial institutions who discuss key EE project development issues and meet with local energy service providers.

Mr. Hinkle led a task that evaluated strategy options for the introduction of private power in Romania as part of USAID's Regulatory Reform and Energy Sector Restructuring project in Central and Eastern Europe. Created a financial model that calculates the economic benefits of different private power development options. The financial model was tailored to match local power sector characteristics and international capital market conditions. As part of pre-privatization activities for the Romanian power sector, also conducted an assessment of options for consolidating the country's existing 42 electric distribution companies. In addition, identified business planning procedures designed to strengthen customer service and DSM capabilities of electricity distribution companies

1995. Hagler Bailly Consulting, Inc. As an associate for Hagler Bailly's energy practice, analyzed restructuring and regulatory reform issues in Central and Eastern Europe for U.S. and international electric utilities. Also identified joint venture partners for a U.S. developer of private power in Latin America and Asia. Wrote reports that assessed regulatory reforms in Hungary and the Czech Republic for a U.S. utility subsidiary. Also evaluated an investment in a new gas turbine technology for a U.S. gas utility, and assessed the technical fit and potential market performance of the turbine in the U.S. market.

1993 - 1994. Booz Allen & Hamilton, Inc. Served as a consultant for Booz Allen & Hamilton's energy and financial services practices. For Booz Allen's energy practice, conducted a merger analysis and hostile takeover defense for a U.S. electric utility and determined the impact of the merger on rate payers and shareholders. Also assessed the strategic options for a U.S. utility within the framework of an increasingly competitive power market, which included the development of an economic model that determined the

impact of the Clean Air Act on nationwide utility fuel choice and cost.

1991 - 1992. Various management consulting assignments, including:

- *U.S. House of Representatives*—organized and participated in a conference on business opportunities for Massachusetts companies in Central Europe and the former Soviet Union for U.S. Congressman Chester Atkins. The conference focused on the development of infrastructure projects and the promotion of U.S. exports in key business sectors, including agriculture, computer software, energy, and telecommunications. The conference included presentations by representatives from the EBRD, OPIC, USAID, U.S. Export-Import Bank, and the World Bank.
- *Edison Electric Institute*—prepared a report for Edison's CEO steering committee on U.S. utility technical assistance efforts to Central Europe and the former Soviet Union.

*New England Electric Resources, Inc.(NEERI)*—coordinated NEERI's Washington affairs for a USAID utility partnership program in Hungary. Prepared an analysis of funding availability for NEERI power sector projects in Central Europe (Hungary and Poland).

**BRIAN WOOD—PUBLIC SECTOR PROCUREMENT LEAD  
AND FINANCIAL ANALYST**

**Key Qualifications**

Mr. Wood has 20 years of experience in developing markets for energy efficiency products and services in developing countries and North America as well as broad energy policy experience that encompasses oil and gas production, electric and gas utility deregulation, coal mining, tariff design, and environmental regulation of energy resource development. He completed a 2-½ year assignment in Cairo, Egypt, managing a \$2 million program to transform the private market for energy efficiency products and services and to develop organizational capabilities to administer DSM programs. During this time, Mr. Wood worked extensively with electricity distribution companies and generating companies, local manufacturers, distributors and service providers, end user groups, and government agencies on issues relating to energy efficiency technology development and market transformation.

Mr. Wood's policy analysis and development experience in the energy sector stems from work in several leading consulting firms, the California Public Utilities Commission, and Pacific Gas and Electric Company, all pioneers in policy and regulatory development over the past twenty years. He was project manager or lead analyst on major projects that include: development of standardized purchase power agreements for California independent power producers and associated regulatory procedures for new generation development, deregulation of wholesale natural gas pricing, rationalization of state environmental regulation of onshore oil production and well abandonment practices, coal transportation pricing and coal mine appraisals, federal technology R&D policy for secondary and tertiary oil recovery, and integration of utility-based energy efficiency policies and regulatory-based air pollution and waste minimization policies in the South Coast Air Quality Management region (southern California), among many other projects.

**Education**

M.B.A., Finance and Strategic Planning, Haas School of Business, University of California (Berkeley), 1987

M.P.P., Graduate School of Public Policy, University of California (Berkeley), 1986

Ph.D. Candidate, Engineering-Economic Systems, Stanford University, 1982-1983

BS, Mechanical Engineering, Stanford University, 1979

**Experience**

2000 - Present. Nexant (a Bechtel technology and consulting company). Working with Thai universities on a World Bank project—*Thailand Energy Efficiency Procurement in the Education Sector*—to assess procurement methods and develop procurement approaches to encourage development of energy efficiency product market targeted at the education sector (universities, public schools), for later expansion to the entire government institutional market.

1995 - 1999. Bechtel Consulting. Managed a 2-year *Energy Conservation and Environment Project (ECEP)* subprogram for USAID/Egypt on location in Cairo. Project focused on EE market development and DSM. Management responsibilities included:

- Fostering market development, including assessments of the local and regional EE business sector, barriers and opportunities to energy efficient technologies in industry, and support to an emerging energy service business sector through promotion, training, and development of contractual vehicles for contracting
- Establishing linkages with U.S. and international databases, trade associations, and manufacturers for local firms developing energy efficient product extensions to existing product lines
- Performing assessments of local EE equipment supply and service capabilities. Evaluated the Egyptian equipment supply and manufacturing capabilities, as well as equipment repair and engineering design capabilities for several energy technology markets (including electric motors and



rotary machinery, steam systems, diagnostic instruments, etc.)

- Developing EE motor supply industry. Conducted a survey of local manufacturers, traders, and motor rewind shops. Assessed economic feasibility of energy efficient motors for end user market segments. Equipped a motor testing lab and developed a motor testing service. Prepared a market entry strategy and linked local manufacturers with foreign suppliers of EE motors
- Developing cogeneration market. Directed training of a local team in preparing cogeneration feasibility studies, conducted promotional seminars, directed numerous feasibility studies
- Developing EE service business. Assisted local counterparts in developing sustained energy efficiency service businesses through business plan development and management assistance
- Performing technical evaluations of investment opportunities and needs for individual industrial plants and for broader industrial sectors (cement, petroleum, chemicals, textiles and metals sectors)
- Demonstrating and promoting EE products at industrial and commercial sites. Demonstrated technologies included maintenance-free steam traps, high efficiency lighting, high efficiency vacuum pump systems, combustion efficiency diagnostic equipment, and metering equipment. Promotional activities included technical workshops, brochures and manuals, case studies, vendor promotions, and a trade show
- Conducting surveys of public and industrial consumer markets using local market research firms
- *Vietnam Commercialization and Privatization Assistance.* For Asian Development Bank project, developed training materials and conducted a workshop for Electricity of Vietnam to build staff capabilities for unbundling of services and restructuring of generation, transmission, and distribution operating units. Topics included performance-oriented costing and management approaches to electric utility operations, utility market economics, cost-benefit assessment, cost unbundling, and activity based costing.
- *Profile Of The Egyptian Energy Efficiency Business Sector / USAID Egypt.* Prepared a survey and guidebook to US investment in the Egyptian EE business sector, including survey of businesses with principal market share, assessment of investment opportunities, market potential for EE business products, current market evaluations, and barriers assessment.
- *Market Transformation Potential and Impacts for Emerging Electric and Gas Technologies / Consortium of California Utilities and Environmental Regulators.* Led a study to evaluate and model potential impacts of advanced industrial process technologies on pollutant emissions and electricity consumption, incorporating the effects of policy variables such as market-based emissions tariffs, best-available-technology requirements on boilers and process systems, and other regulatory approaches. Developed a technology database for energy efficient products for key industrial markets and selected residential markets.
- *Industrial Energy Efficiency Market and Technology Assessment / Ontario Hydro.* Managed a 1-year study of the twelve major industrial sectors in Ontario, market opportunities for high-efficiency industrial technologies, development of EE database for industrial applications.

Additional assignments during this period included:

- *Abu Dhabi DSM Resource Assessment.* Manager responsible for assessment of DSM resource potential for Abu Dhabi Water and Electricity Authority, as well as demand forecasting tasks for the Abu Dhabi Master Plan for Water and Power. Abu Dhabi, United Arab Emirates.

**JONATHAN D. FOORD—FINANCIAL ANALYST****Key Qualifications**

Jonathan Foord is a chartered accountant with over 10 years experience in accounting, finance and economics, with a focus on energy sector finance, and has significant experience in Eastern Europe, including Romania, Ukraine, Czech Republic, Russia, and Poland. For Nexant, Mr. Foord advises clients in the areas of economic and financial forecasting; financial planning and business plan development; accounting; and business and accounting systems and controls.

**Education**

M.A., Economics and Land Economics, University of Cambridge

**Experience**

**1997 - Present.** Nexant (a Bechtel technology and consulting company) and Bechtel Consulting. Consultant, with experience in various regions, consulting disciplines, and industries. His consulting experience includes:

*Ukraine, UkrESCO (Ukrainian Energy Services Company)*—UkrESCO was created to finance energy efficiency projects in Ukraine. As finance and accounting expert, was involved with implementing company accounting systems and evaluating potential energy investments.

- *Romania, Brasov Power Utility (USAID)*—working with the senior management of the Brasov Transmission and Distribution Power Company, analyzed the company's organizational structures with a view to reorganizing into separate distribution and transmission companies; performed a client service assessment; and advised on potential service delivery improvements.
- *Czech Republic, Energy Project*—a technical and economic prefeasibility study of a clean coal power station. Tasks included:

- Economic modeling and evaluation of the proposed power project

- Financial modeling and evaluation of the proposed power project
- Analysis of project costs and revenues, including discounted cash flow analysis

- *Poland - Polish Energy Regulator (USAID)*—worked with the Polish energy regulator, providing advice on how the regulator could perform its statutory duties in respect to the setting of tariffs more efficiently.
- *Nizhny Novgorod, Russia, Norski Refinery study (EBRD)*—a technical and economic prefeasibility study of a proposed upgrade to a Russian refinery. Tasks included:

- Economic modeling and evaluation of the proposed refinery upgrade
- Financial analytical review of Norski Refinery and Norski Oil statutory accounts

- *Nigeria, Technical Assistance to NEPA (USAID)*—under USAID technical assistance program for Nigeria, was responsible for improving financial management of NEPA. Issues advised on included:

- Cost unbundling
- Revenue allocations between proposed new divisions
- Operating and capital budgeting

**1995 - 1997. Bechtel Limited.** As senior accountant in the financial accounting group, primary responsibilities were:

- Preparing Bechtel's statutory accounts
- Performing investment appraisals, including discounted cash flows
- Preparing documentation of accounting systems and flowcharting
- Assessing submitted bids, and negotiating and contracting with selected bidder
- Developing models, and forecasting future market sizes and necessary resource requirements

1991 - 1995. Ernst and Young. Began accounting career, progressing to senior auditor and business advisor working with some of the largest U.K. companies. Primary responsibilities included:

- Client liaison
- Audit planning
- Accounting system and control documentation and flowcharting
- Audit team fieldwork supervision, review, and control
- Audit findings preparation and presentations

1989 - 1990. Hillier Parker. Worked with a property consultant advising institutional and other investors on acquisition and disposal of property investments. Primary responsibilities included:

- Liaising and negotiating with clients
- Evaluating legal issues
- Estimating capital values
- Projecting future income

Preparing discounted cash flow analysis

**LEA A. SWANSON—TRAINING LEAD AND PROGRAM DEVELOPMENT ADVISOR**

**Key Qualifications**

Ms. Swanson has extensive experience in energy efficiency and energy conservation and has broad in-country experience in Central, Eastern and Southeastern Europe as a field project manager for USAID. She is presently the director of the International Institute for Energy Conservation, where she manages a team of professionals implementing energy conservation and efficiency programs in Central and Eastern Europe.

**Education**

M.P.A, Harvard University, John F. Kennedy School of Government, 1990

M.B.A, Strategic Management and National Development, Monash University, Australia, Graduate School of Management, 1994

B.A., Political Science and Philosophy, Monash University, Australia, School of Humanities, 1985

**Experience**

2000 - Present. International Institute for Energy Conservation (London). As director, manages a team of energy and environmental professionals designing and implementing projects in Central and Eastern Europe and the Newly Independent States.

1998 - 2000. U.S. Agency for International Development (Budapest). As senior regional environment advisor, was responsible for:

- *Regional Initiatives*—field project manager for USAID's new \$25 million region-wide environment and trade and investment initiative, "EcoLinks." Responsibilities included program marketing, supporting individual USAID field missions with in-country implementation, overseeing implementing partners across the region. Assisted with design, implementation, and coordination of other regional initiatives with USAID missions, including Southeastern Europe Cooperative Initiative (SECI) and The Alliance to Save Energy regional initiatives.

- *Field Mission Support*—in response to USAID field mission requests, and drawing on collective and discrete experience of USAID programs throughout the region, responsibilities included:

- Providing consultation and guidance on strategic and programmatic issues related to environment and energy efficiency, including promoting environment/energy efficiency trade and investment, developing market-based approaches to environmental problems, and guiding policy formulation to promote sustainable development.
- Assisting in the design, monitoring, and evaluation of USAID activities in environment and energy efficiency; addressing complex environmental issues having multisector ramifications in tasks ranging from technical needs assessments to project design and development through country program evaluations.
- Providing training for USAID foreign service nationals, U.S. direct hire, and contract employees drawn from USAID field missions throughout Central and Eastern Europe and the New Independent States on a regular basis.

1995 - 1998. U.S. Agency for International Development (Kiev). As director of environmental development for Ukraine, Belarus, and Moldova, directed environmental development and energy efficiency programs. Negotiated, programmed and managed \$26 million budget (cumulative 1996, 1997, 1998); supervised 3 environment program staff and 11 contractors. Designed and implemented programs aimed at integrating environment with economic and social development, including programs focused on: local and international market incentives for environmentally sustainable manufacturing and agricultural practices; energy efficiency in all sectors; environmentally sound and efficient urban infrastructure design and development, and feasibility of nationally-funded subsidy models that can be adopted during the period of transition to economic reform.

Developed and implemented training programs for members of the governments of Ukraine, Belarus, and Moldova, including training on waste minimization and management, risk assessment, benefit/cost analysis.

Served as USAID representative at international symposiums, workshops, and negotiations on issues including the development and implementation of national environmental action plans, and national environmental policies and legislation. Designed, developed, and managed Ukraine Council and Work Group Program to Promote Sustainable Development. Designed, developed, and directed demonstration projects to explore alternative problem solving and/or problem management approaches with cooperating country participants.

Demonstration projects included: energy efficiency (industrial and municipal); municipal water supply and management; water quality evaluation and monitoring; pesticide and agricultural chemical management; environmentally-sound business development; pollution prevention; waste reduction, management, and recycling. Provided independent analysis of major environmental policy issues affecting Ukraine, proposed legislative initiatives, and reports to the U.S. government and to the cooperating country's government. Issues included the role of environmental protection in economic restructuring; sustainable development as an organizing framework for national policy development; environmental strategic planning; urban infrastructure development and maintenance; sustainable agriculture; international agreements and cooperation -- including international trade issues; industrial enterprise pollution control; performance measurement; alternative approaches to problem-solving; methodologies for environmental risk assessment; promotion of environmentally sound technologies; eco-business, eco-tourism, financial management and product marketing.

**1991 - 1995. U.S. Environmental Protection Agency.** As special assistant for policy, planning, and evaluation in the Office of the Assistant Administrator, formulated, developed, and recommended policies and strategies for implementing federal laws and achieving national priorities. Co-chaired U.S. Joint Experts Workgroup on Trade and the Environment and co-led the U.S. delegation to the OECD.

**1991 - 1993. U.S. Environmental Protection Agency.** As special assistant, strategic planning and environmental data in the Office of Policy, Planning, and Evaluation, provided consulting service to EPA programs on strategic planning methodologies and practical applications.

1987 - 1989. Monash University (Australia). Deputy manager, planning and analysis, responsible for piloting the integration of university-wide planning and budgeting.

IVEL

**CURRICULUM VITAE**

**Name:** Lazar Lazarov

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**Date of birth:** [REDACTED]

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**Nationality:** Bulgarian

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**Education:** M.Sc. in Energy Engineering, Technical University, Sofia (1972-77)

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**Language Skills:** Bulgarian, English, Russian, Macedonian

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**Membership of Professional Bodies and Achievements:** Member of the Association of Energy Engineers

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**Computer Skills:** Microsoft Office; Heat Balance

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**Career Summary:** Has a wide range of project management and engineering skills and experience, combined with industrial management experience gained during a period of considerable change. His experience is based on more than twenty years spent working in a large textile plant in a variety of roles, including Engineering Manager. His experience also includes energy consultancy, power station design and construction, energy management, and management of environmental improvement schemes. He has particular experience of developing, evaluating and installing energy savings projects, including environmental and safety issues.

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**Specific Eastern Countries Experience:** Bulgaria

**Work History:** 1999 – to date: IVEL Consult,  
Position: HVACR and energy efficiency Specialist

**Energy Efficiency Programme for Bulgarian Telecommunication Company's Office Buildings in the towns of Plovdiv, Smolyan, Chepelare and Devin, Client: BTC (1999)**

Conducted preliminary energy audits in eight buildings and implemented a comprehensive energy services program to the main building in Plovdiv including energy audit, feasibility study, preparation of front end design and engineering package for a packaged boiler and other heating system improvements, procurement and installation of equipment, extended warranty, performance guarantee, operations and maintenance, and monitoring and verification services.

1978 – 98: Fintex Textile Factory  
Position: Utilities and Engineering Manager

Responsible to the Managing Director for site wide engineering and maintenance activities, and for the safe and efficient operation of the Boiler house, Utilities and Effluent plants on a large and complex textile factory. Direct staff 70, Contractors 80.

- Implemented significant energy efficiency improvement projects.
- Project Managed major environmental impact improvement projects.
- Project managed significant site and utilities improvement projects.
- Restructured the Engineering organisation and directed Total Quality Management in the engineering sector.
- Improved substantially engineering contractors performance on quality, cost and safety.



**TOMA GEORGIEV**

**Relevant Tasks: Legal (solicitations, leases, contracts, energy performance contracting)**

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**Key Qualifications:**

Toma Georgiev is a legal specialist who has provided legal counseling to investors, energy efficiency project developers and energy consultants on a number of energy related projects in South Eastern Europe as well as in the Former Soviet Union countries for the past 9 years. He has extensive experience in the development and negotiation of contracts for investment grade energy audits, for implementation of energy efficiency projects in Bulgaria, FYR Macedonia, and Ukraine. Developed and negotiated lease contracts as well as credit sale agreements for ESCO type projects as well as represented an ESCO in arbitration. Since 1996, he has been continuously involved with legal consulting work and training support to energy efficiency programs funded by the European Commission (EC), and the European Bank for Reconstruction and Development (EBRD). Conducted legal due diligence for a wide range of customers. Contributed to energy related studies and contract management of energy conservation projects in Bulgaria and Ukraine.

**Education:**

MBA Business Studies, Sofia University, Bulgaria, 1990/91  
LLM Law School - Sofia University, Bulgaria, 1986/90

**Experience Record:**

1999-Present IVEL Consult, Bulgaria.  
**Business Development and Legal Advisor to UkrEsco, EC/EBRD project:**  
Development and operation of a Ukrainian Energy Service Company (UkrEsco), Kiev, Ukraine.

1996-1999 Legal and Business Consultant, IVEL Consult, Bulgaria.

1991-1995 Junior Associate, Legal Firm "Jurex", Bulgaria.

**Countries of Work Experience:**

Bulgaria, FYR Macedonia, Hungary, and Ukraine

**Relevant Technical Experience:**

- IVEL Consult, Bulgaria (1996-p), including the following assignment:  
  
*Business Development and Legal Advisor to UkrEsco, EC/EBRD project: Development and Operation of a Ukrainian Energy Service Company (UkrEsco). (1999-p).* Legal and contractual support to Bechtel/Nexant and UkrEsco team supervising and/or conducting legal due diligence in respect of provision of project finance for industrial energy equipment upgrade and rehabilitation as well as district heating systems operators; development and negotiations of energy performance contracts as well as subcontract for the implementation of energy efficiency projects; energy savings monitoring and verification. Conducted a detailed study on legal aspects of energy efficiency performance contracting in Ukraine reviewing performance contracting opportunities in Ukraine; associated legal risk such as risks related to the historic development of Ukrainian legislation, to the legal style of the continental legal system in Ukraine, to the hierarchical structure of Ukrainian Legislation; also legal risks associated with the major legal branches in Ukraine, especially Business Activities Law, Law of Contract, Pledge Law, Leasing Law, Property Law, Tax Laws, Law on Enterprises in Ukraine, Law on Commercial Corporations, Bankruptcy Law, Investment Law and other laws that are related to Performance Contracting, such as Environmental Protection laws. Ukrainian Litigation and Court System were examined with an emphasis on the effectiveness of Court procedures; required amount of time to proceed a case; unreliability and unpredictability of the

procedures. Legal risk management strategies have been assessed and draft samples of Project Development Agreements, Energy Services Agreements, Lease Agreements, Credit Sale Agreements, Pledge Agreements as well as Energy Performance Contracts, considered to be most relevant to the Ukrainian environment, have been developed. Presentations on the ESCO approach have been made at numerous meetings. Training on legal aspects of the ESCO business have been provided to UkrEsco's legal specialist , Supervisory Board and Executive Director.

**Energy Efficiency ESCO type Programs for hotels in Bulgaria and Macedonia, Client: Hotel owners (1998):** Preparation of contractual packages dealing with extended warranty, performance guarantees, operations and maintenance, and monitoring and verification services. Disputes resolution undertaken on several occasions.

**Gas Purchasing Contracts, Client: confidential**

Business development and contract drafting and negotiation for gas supply for the Plovdiv and Sofia District heating companies and other industrial energy end-user in the cities of Sofia and Plovdiv, Bulgaria as well as Scopie, FYROM. Involved in the negotiation of the gas distribution network of Plovdiv. Gas purchasing contract development and negotiations for various industrial plants in Bulgaria such us ceramic factory, glass factory, district heating plant etc.

**Feasibility study on Gas Conversion. Client: Hospitals in Plovdiv**

Completed the economic analysis of the feasibility study on gas conversion of boilers as well as a CHP investment options evaluation for two hospitals in Plovdiv, Bulgaria. ESCO approach has been assessed.

**Legal Consultations to International Energy Consulting Firms**

Has acted as a local legal consultant to Electrotek (USA) – drafted energy performance contracts in Bulgaria, Cameron MCKenna (UK) – assistance in the development of new energy laws for countries in transition, The Danish Energy Agency (Denmark) – assessment of gas supply options for district heating plants, Globe Meat (Denmark) – economic and marketing analysis of Bulgarian meat market and others.

**Seminars and Workshops**

Conducted a number of workshops and seminars on contract formation and contract management for various Energy Projects.

**Legal Due Diligence**

Prepared numerous due diligence reports for Bulgarian clients.

- **Junior Associate, Legal Firm "Jurex", Bulgaria (1991-1995):** Providing legal support to Senior Associates.

**Languages:**

	Speaking	Reading	Writing
English	Fluent	Fluent	Fluent
Bulgarian	Fluent	Fluent	Fluent
Macedonian	Fluent	Fluent	Good
Croatian	Good	Fair	Fair

**Publications:**

Publications, presentations and reports on energy law and legal risks identification and management in countries in transition.

## CURRICULUM VITAE

Name: Ilko Velikov

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Date of birth: [REDACTED]

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Nationality: Bulgarian

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Education: Management Training in British Industry, University of Luton, UK, February 1998  
 Certified Energy Manager (CEM), AEE, Atlanta, USA, September 1998  
 Business Administration and Development Training, Harvard, USA, March 1995  
 M.Sc. in Architecture and Project Management, Sofia Engineering and Architectural University, Bulgaria, 1990/1995

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Language Skills: Bulgarian, English, Russian, Macedonian, and German

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**Membership of Professional Bodies and Achievements:**

CEM Instructor within the country of Bulgaria certified by AEE, USA  
 Member of the Association of Energy Engineers, AEE, USA  
 Associated Member, Leadership for Environment and Development, Geneva

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Computer Skills: Microsoft Office; Autocad R13; DCAD 5; 3D STUDIO-release 4; Coreldraw 5; Animator Pro 2; Adobe Photoshop; Page Maker; Heat Balance

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Career Summary: Six years of experience in architectural and energy efficiency consulting, energy audits, investment proposals, liaison with the government officials and local banks on behalf of international clients, identification of local partners, development of energy efficiency projects, performance contracting experience including detailed building shell analysis, funds disbursement management, and the management of performance contracts. Project management of ESCO type projects of over USD 100,000.

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Specific Eastern Countries Experience: Bulgaria, Republic of Macedonia

Work History: 1994 – to date: **IVEL Consult,**  
 Position: **Architectural Design, Energy Efficiency and CAD Specialist**

**Consultancy Services to International clients include:**

Turning up prospects for performance contracting deals, identification of local partners and financial institutions in Central and Eastern Europe, financial and economic data gathering and analyses, feasibility studies for small-power and energy efficiency projects in Bulgaria. Some current relevant energy efficiency consulting assignments in South East Europe include:

- A study on diversification of gas supply in Albania, Bosnia-Herzegovina, Republic of Macedonia and Romania: Input was made to the assessment of gas demand for the building stock, taking into account energy efficiency, technical and economic aspects, client: Bechtel.

- Investment Grade Energy Audits in Bulgaria for hospitals in Bulgaria including detailed cash flow analysis, identification of local sources of finance, detailed project implementation schedule, detailed financial disbursement schedule; and performance contract management, client: Electrotek
- Training seminars in energy management, client Electrotek.
- Project management of an ESCO type project of over USD 100,000, client Electrotek.

**A Sample of Other Energy Efficiency Assignments with IVEL Consult:**

- Energy Audits, Architectural Designs for energy efficiency projects for a number of commercial and industrial buildings in the cities of Sofia, Plovdiv, Burgas and Varna, Bulgaria as well as Scopie, FYROM.
- Procurement of materials and equipment.
- CAD and 2D Studio models and designs.
- Project management of energy efficiency projects (performance contracts) at two hotels and a hospital in Plovdiv, Bulgaria resulting in improved energy efficiency of 50%.
- Energy efficiency and architectural consultancy work in municipal building such as hospitals, schools and cinemas in Bulgaria.

ECO-ERG

## CURRICULUM VITAE

1. Family Name: GRASIN
2. First Names: VASILE
3. Date of Birth: XXXXXXXXXX
4. Nationality: ROMANIAN
5. Civil status: MARRIED
6. Education:

<i>Institution:</i>	1. CLUJ POLITECHNICAL UNIVERSITY, ELECTROTECHNICAL FACULTY 2. THE ASSOCIATION OF ENERGY ENGINEERS, ATLANTA, U.S.A. 3. GOVERNMENT OF ROMANIA, DEPARTMENT FOR EUROPEAN INTEGRATION
<i>Dates: from (month/year): to (month/year)</i>	1. SEPT. 1973 - JULY 1979 2. FEB. 1993 - JULY 1993 3. OCTOBER 1997
<i>Degree(s) or Diploma(s) obtained</i>	1. DIPLOMAT ENGINEER 2. CERTIFIED ENERGY MANAGER 3. PROJECT MANAGER

7. Language skills: (mark 1 to 5 for competence)

<i>Language</i>	<i>Reading</i>	<i>Speaking</i>	<i>Writing</i>
ENGLISH	5	4	4
FRENCH	5	3	3
HUNGARIAN	1	2	

8. Membership of professional bodies:
  - MEMBER OF THE ASSOCIATION OF ENERGY ENGINEERS -  
ATLANTA, GA, U.S.A

- PRESIDENT OF THE ASSOCIATION OF ENERGY ENGINEERS -  
CLUJ NAPOCA CHAPTER

9. Other skills: (e.g. computer literacy): COMPUTATION SKILLS
10. Present Position: OWNER, MANAGING ASSOCIATE OF S.C. "ECO-  
ERG" TEHNOLOGIE SERVICE LTD. CLUJ
11. Years with the organization: FEB.1992 - UNTIL NOW
12. Key qualifications: (relevant to the project):

WORK IN TEAM, LIKE CERTIFIED ENERGY MANAGER, IN ENERGY SAVINGS PROJECTS, SAVINGS VERIFICATION, PRE & FEASIBILITY STUDIES AND ENERGY IMPROVEMENT IMPLEMENTATION FOR:

- FOOD INDUSTRY
- WOOD INDUSTRY
- PETROCHEMICAL INDUSTRY
- PHARMACEUTICAL INDUSTRY
- CEMENT INDUSTRY
- METALURGICAL PLANTS
- MINING INDUSTRY
- HOSPITALS & SCHOOLS

RECENT RESULTS:

- IMPLEMENTATION OF ENERGY SAVING MEASURES AT A PHARMACEUTICAL PLANT, BY MONITORING THE THERMAL ENERGY PRODUCTION AND CONSUPTIONS, SAVING VERIFICATIONS, THROUGH US AID EMERGING ENERGY EFFICENCY PROJECT IN ROMANIA
- IMPLEMENTATION OF ENERGY SAVING MEASURES AT A HOSPITAL ,BY:
  - MONITORING THE ENERGY PRODUCTION AND CONSUPTIONS,SAVING VERIFICATIONS ,THROUGH US AID EMERGING ENERGY EFFICENCY PROJECT IN ROMANIA
  - CHANGING THE HOT TO DOMESTIC WATER PRODUCTION
  - CHANGING THE LIGHTING SYTEM
  - BUILDING ENVELOPE REHABILITATION
  - ALTERNATIVE HEAT GENERATION SYSTEM

THROUGH US AID EMERGING ENERGY EFFICENCY PROJECT IN ROMANIA AND HOSPITAL'S FINANCIAL EFFORT

- ENERGY AND MONEY SAVINGS BY DECREASING THE ENERGY LOSSES ON STEAM AND HOT WATER PIPING SYSTEM ,AND INFRARED IMAGING FOR MAINTENANCE IN A METALURGICAL PLANT
- PRE & FEASIBILITY STUDIES FOR BREWERIES AND CEMENT PLANTS
- IMPLEMENTATION OF ENERGY AND MONEY SAVING MEASURES AT CEMENT PLANTS IN ROMANIA
- BASE LINE FOR ENERGY SAVINGS FOR MILK PLANTS IN SINERGY - EU PHARE PROGRAM

13. Professional Experience Record

<i>Dates: from (month/year): to (month/year)</i>	<ol style="list-style-type: none"> <li>1. 1979 – 1980</li> <li>2. 1980 – 1986</li> <li>3. 1986 – 1992</li> <li>4. 1992 - UNTIL NOW</li> </ol>
<i>Location:</i>	<ol style="list-style-type: none"> <li>1. County of Maramures,Romania</li> <li>2. County of Cluj,Romania</li> <li>3. Cluj City,Romania</li> <li>4. Cluj City,Romania</li> </ol>
<i>Organization:</i>	<ol style="list-style-type: none"> <li>1. Ferrous mine in County of Maramures</li> <li>2. Ferrous mine in County of Cluj</li> <li>3. Research Institute for food industry and freezing technologies</li> <li>4. S.C. Eco – Erg Tehnologie Service Ltd.</li> </ol>
<i>Position</i>	<ol style="list-style-type: none"> <li>1. Electromechanical diplomat engineer in preparation department</li> <li>2. Chief of work protection department</li> <li>3. Principal engineer of testing and verification laboratory</li> <li>4. General Manager</li> </ol>
<i>Description:</i>	<ol style="list-style-type: none"> <li>1. Maintenance of mining equipment</li> <li>2. Prescriptions for work protection</li> <li>3. Testing,measurements and verification for all kind of food processing ,pharmaceutical and cryogenic equipment</li> <li>4. Energy consultant for industrial and institutional customers</li> </ol>



14. Other Information:  
E.g. Publications:

- "ECO - ERG TEHNOLOGIE SERVICE LTD. CLUJ,ROMANIA ACTIVITY IN US AID EMERGING ENERGY EFFICIENCY PROGRAM FOR EAST EUROPEAN COUNTRIES - A.E.E. EAST EUROPEAN CONFERENCE, BUDAPEST,JUNE 1995
- "ENERGY AND MONEY SAVINGS AT A HOSPITAL" - ROMANIAN A.E.E. INTERNATIONAL CONFERENCE ,BUCHAREST,NOV.1996
- "ENERGY AND MONEY SAVINGS AT A PHARMACEUTICAL PLANT" - ROMANIAN A.E.E. INTERNATIONAL CONFERENCE ,BUCHAREST,NOV.1996
- "ENERGY EFFICIENCY MEASURES IMPLEMENTATION AT A BREWERY" - A.E.E. INTERNATIONAL CONFERENCE,BUDAPEST, JUNE 1999
- IN COUNTRY TRAINER FOR CERTIFIED ENERGY MANAGERS - A.E.E. CLUJ NAPOCA CHAPTER
- PRESIDENT OF A.E.E. CLUJ NAPOCA CHAPTER

## CURRICULUM VITAE

1. Family Name: PADUREANU
2. First Names: GEORGETA
3. Date of Birth: XXXXXXXXXX
4. Nationality: ROMANIAN
5. Civil status: MARRIED
6. Education:

<i>Institution:</i>	1. CLUJ " BABES-BOLYAI UNIVERSITY, PHYSICS FACULTY 2. CLUJ " BABES-BOLYAI UNIVERSITY, PHYSICS FACULTY, ATOMIC AND NUCLEAR RESEARCH DEPARTMENT 3. THE ASSOCIATION OF ENERGY ENGINEERS, ATLANTA, U.S.A. 4. GOVERNMENT OF ROMANIA, DEPARTMENT FOR EUROPEAN INTEGRATION
<i>Dates: from (month/year): to (month/year)</i>	1. SEPT. 1973 - JULY 1977 2. SEPT. 1977 - JULY 1978 2. FEB. 1993 - JULY 1993 3. OCTOBER 1997
<i>Degree(s) or Diploma(s) obtained</i>	1. PHYSICIST 2. SPECIALIST IN NUCLEAR PHYSICS 2. CERTIFIED ENERGY MANAGER 3. PROJECT MANAGER

7. Language skills: (mark 1 to 5 for competence)

<i>Language</i>	<i>Reading</i>	<i>Speaking</i>	<i>Writing</i>
ENGLISH	5	4	4
FRENCH	5	3	3
HUNGARIAN	3	3	2
GERMAN	2	2	1

8. Membership of professional bodies:

- MEMBER OF THE ASSOCIATION OF ENERGY ENGINEERS -  
ATLANTA, GA, U.S.A

- VICE-PRESIDENT OF THE ASSOCIATION OF ENERGY ENGINEERS - CLUJ NAPOCA CHAPTER

9. Other skills: (e.g. computer literacy): COMPUTATION SKILLS
10. Present Position: OWNER, MANAGING ASSOCIATE OF S.C. "ECO-ERG" TEHNOLOGIE SERVICE LTD. CLUJ
11. Years with the organization: FEB.1992 - UNTIL NOW
12. Key qualifications: (relevant to the project):

WORK IN TEAM, LIKE CERTIFIED ENERGY MANAGER, IN ENERGY SAVINGS PROJECTS, SAVINGS VERIFICATION, PRE & FEASIBILITY STUDIES AND ENERGY IMPROVEMENT IMPLEMENTATION FOR:

- FOOD INDUSTRY
- WOOD INDUSTRY
- PETROCHEMICAL INDUSTRY
- PHARMACEUTICAL INDUSTRY
- CEMENT INDUSTRY
- METALURGICAL PLANTS
- MINING INDUSTRY
- HOSPITALS & SCHOOLS

RECENT RESULTS:

- IMPLEMENTATION OF ENERGY SAVING MEASURES AT A PHARMACEUTICAL PLANT, BY MONITORING THE THERMAL ENERGY PRODUCTION AND CONSUPTIONS, SAVING VERIFICATIONS, THROUGH US AID EMERGING ENERGY EFFICENCY PROJECT IN ROMANIA
- IMPLEMENTATION OF ENERGY SAVING MEASURES AT A HOSPITAL ,BY:
  - MONITORING THE ENERGY PRODUCTION AND CONSUPTIONS,SAVING VERIFICATIONS ,THROUGH US AID EMERGING ENERGY EFFICENCY PROJECT IN ROMANIA
  - CHANGING THE HOT TO DOMESTIC WATER PRODUCTION
  - CHANGING THE LIGHTING SYTEM
  - BUILDING ENVELOPE REHABILITATION
  - ALTERNATIVE HEAT GENERATION SYSTEM

THROUGH US AID EMERGING ENERGY EFFICENCY PROJECT IN ROMANIA AND HOSPITAL'S FINANCIAL EFFORT

- ENERGY AND MONEY SAVINGS BY DECREASING THE ENERGY LOSSES ON STEAM AND HOT WATER PIPING SYSTEM ,AND INFRARED IMAGING FOR MAINTENANCE IN A METALURGICAL PLANT
- PRE & FEASIBILITY STUDIES FOR BREWERIES AND CEMENT PLANTS
- IMPLEMENTATION OF ENERGY AND MONEY SAVING MEASURES AT CEMENT PLANTS
- BASE LINE FOR ENERGY SAVINGS FOR MILK PLANTS IN SINERGY - EU PHARE PROGRAM

13. Professional Experience Record

<i>Dates: from (month/year): to (month/year)</i>	<ol style="list-style-type: none"> <li>1. 1978 – 1979</li> <li>2. 1979 – 1981</li> <li>3. 1981 – 1992</li> <li>4. 1992 - UNTIL NOW</li> </ol>
<i>Location:</i>	<ol style="list-style-type: none"> <li>1. County of Vilcea,Romania</li> <li>2. County of Cluj,Romania</li> <li>3. Cluj City,Romania</li> <li>4. Cluj City,Romania</li> </ol>
<i>Organization:</i>	<ol style="list-style-type: none"> <li>1. Heavy water preparation plant in County of Vilcea</li> <li>2. Non - ferrous mine in County of Cluj</li> <li>3. Research Institute for food industry and freezing technologies</li> <li>4. S.C. Eco – Erg Tehnologie Service Ltd.</li> </ol>
<i>Position</i>	<ol style="list-style-type: none"> <li>1. Laboratory physicist</li> <li>2. Laboratory physicist and preparation department</li> <li>3. Researcher in testing - verification laboratory and Quality Insurance Department</li> <li>4. Executive Director</li> </ol>
<i>Description:</i>	<ol style="list-style-type: none"> <li>1. Product quality verifications</li> <li>2. Final products quality verifications</li> <li>3. Testing ,measurements and verification for all kinds of food processing ,pharmaceutical and cryogenic equipment And Quality Insurance Prescriptions</li> <li>4. Energy consultant for industrial and institutional customers</li> </ol>

14. Other Information:  
E.g. Publications:

- "ECO - ERG TEHNOLOGIE SERVICE LTD. CLUJ,ROMANIA ACTIVITY IN US AID EMERGING ENERGY EFFICIENCY PROGRAM FOR EAST EUROPEAN COUNTRIES - A.E.E. EAST EUROPEAN CONFERENCE, BUDAPEST,JUNE 1995
- "ENERGY AND MONEY SAVINGS AT A HOSPITAL" - ROMANIAN A.E.E. INTERNATIONAL CONFERENCE ,BUCHAREST,NOV.1996
- "ENERGY AND MONEY SAVINGS AT A PHARMACEUTICAL PLANT" - ROMANIAN A.E.E. INTERNATIONAL CONFERENCE ,BUCHAREST,NOV.1996
- "ENERGY EFFICIENCY MEASURES IMPLEMENTATION AT A BREWERY" - A.E.E. INTERNATIONAL CONFERENCE,BUDAPEST, JUNE 1999
- VICE-PRESIDENT OF A.E.E. CLUJ NAPOCA CHAPTER

ENERGY SERV

## CURRICULUM VITAE

**Name:** BORIS BOBU

**Profession:** Power Engineer

**Address:** [REDACTED]

**Date of birth:** [REDACTED]

**Nationality:** Romanian.

**Status:** Married (2 children).

**Education:** 1979-1974 Polytechnic University-Bucharest,  
Power Faculty.  
1973-1969 High School.  
1961-1969 School.

### **Key Experience**

Experience in working with representatives from International Financing Institutions such as IBRD, EBRD, EIB, PHARE in identifying, preparing and implementing projects for rehabilitation and modernization of the Romanian Power Sector particularly in generation and transport & distribution sides.

Professional experience in the field of oil fired power plant comprising: commissioning, operation, maintenance and repairs.

Practical experience collected during fifteen years activity in a 1000MW power plant.

### **Experience Record**

**Employer:** ENERGY SERV .

February, 2000-to date

**Employer:** ROMANIAN ELECTRICITY AUTHORITY.

1994-2000-Manager-Project Implementation Department.

Responsible for all aspects related to the implementation of a project for the rehabilitation and modernization of Romanian Power Sector financed by: IBRD, EBRD, EIB and PHARE, including overall project management, engineering, procurement, overseeing site construction, testing, commissioning and taking over to operation.

1990-1994-Deputy Manager - BRAZI POWER PLANT -1000MW,

Responsible for operation and maintenance.

1982-1990-Head of Electrical Department BRAZI POWER PLANT.

Responsible for the electrical operation and maintenance activities of the power plant equipment.

1979-1982-Engineer -BRAZI POWER PLANT.

Engineering training in power field.

Assisting senior engineers in various activities.

# Dragostin Catalin

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**Age: 49 years**

**QUALIFICATION:**  
**Power Engineering,**  
University degree  
**Economics**  
**(finance)**  
University degree

**Professional  
Experience**

1974-1990                      Romanian Electricity Authority  
**Operations**

- Power plant shift manager
- Involved and experienced in supplying, erection and commissioning power plants and complex equipment in China, Middle-East countries (Syria, Turkey, Egypt, Iraq)
- Experience in refinery utilities (Pakistan and Romania)

1990-1992                      RENEL (Romanian Electricity Company)

**Deputy Director - Finance**

- Involved in system planning and financial analysis for utility;
- Arrangement and contracting foreign financing for investment and rehabilitation programs of the utility

1992-1996                      RENEL (Romanian Electricity Company)

**Deputy Director - Project Implementation Dept.**

- Financial management and cost control of rehabilitation program, involving generation (5 power plants), transport and distribution (4 transmission lines and 8 substations);
- Project size: 400 million US\$
- Financing: RENEL, WORLD BANK, EUROPEAN INVESTMENT BANK, EBRD, EC-PHARE, JAPAN EXIM-BANK

1996-2000                      ENERGY SERV (private company)

**Managing Director**

- the company provides energy services mainly to industrial customers; typically it is an ESCO type company
- promoting energy efficiency and environment protection technologies
- arrange financing or finances energy efficiency projects



ENERGETIC

**CURRICULUM VITAE**

<b>NAME:</b>	George KACHLRKOV
<b>ADDRESS:</b>	[REDACTED]
<b>DATE &amp; PLACE OF BIRTH:</b>	[REDACTED]
<b>MARITAL STATUS:</b>	Married, two children.
<b>EDUCATION:</b>	<ul style="list-style-type: none"> <li>- Elementary school: diploma 1967 -Marshal Tito, Strumica, Macedonia.</li> <li>- High school: diploma. 1971 -Civil High School Zdravko Cvetiovski, Skopje, Macedonia.</li> <li>- Graduated mechanical engineer - energetic direction Faculty of Mechanical Engineering-Skopje University "Kiril and Metodij" Skopje, Macedonia.</li> <li>- Post graduate studies: Faculty of Mechanical Engineering-Ljubuana, Slovenia.</li> <li>- Doctoral studies (approved in 1997): Faculty of Mechanical Engineering Skopje, Macedonia: "Optimization of dry cooling towers for indirect cooling of circulating water in ThermoPowerplant"</li> </ul>
<b>BRIEF SUMMARY OF ACTIVITIES:</b>	<ul style="list-style-type: none"> <li>- From 1977 to 1983 - Maintenance and later Chief engineer in energy sector in Mines &amp; Iron-Steelworks - Skopje, Macedonia</li> <li>- Froth 1983 to ... Mining Institute -Energy Department as: thermo &amp; vibro diagnostics engineer for TPP, chief engineer and manager.</li> <li>- Member of management board of Public Gasification Corporation of Macedonia - GANIA. .</li> <li>- Collaborator of EMK and LMZ Russia (Power Engineering Corporation) for Balkan's countries.</li> <li>- Collaborator for energy development in ESM Macedonia.</li> </ul>
<b>MAIN ACTIVITIES:</b>	<ul style="list-style-type: none"> <li>- Science &amp; Research projects in energy sector in Macedonia.</li> <li>- Studies and Main projects (energy and mechanical part) for open mines and thermo-power plant Bitola and Oslomej.</li> <li>- Studies and Main projects for heating district systems.</li> <li>- Power Increasing of the turbosets TPP Bitola (from 210 to 225 MW).</li> <li>- Over 50th studies for diagnostic of problems on equipment in TPP.</li> </ul>

*CURRICULUM VITAE*

NAME:	Aleksandar TOMOSKI			
ADDRESS:	[REDACTED]			
DATE & PLACE OF BIRTH:	[REDACTED]			
MARITAL STATUS:	Married,			
EDUCATION:	Graduated mechanical engineer Faculty of Mechanical Engineering-Skopje University "Kiril and Metodlj" Skopje, Macedonia			
LANGUAGE SKILLS				
	a) English	Reading 4	Speaking 3	Writing 3
	b) Serbo-Croatian	Reading 5	Speaking 5	Writing 5
	c) Bulgaria	Reading 5	Speaking 5	Writing 5
MEMBERSHIP OF PROFESIONAL ORGANISATIONS				
	President of Energetic Association of Macedonia - Z IMAK, (1992-1997) now member of President Hoard			
OTHER SKILLS	(eg. Computer literacy etc.)			
PRESENT POSITION:	Private consultant			
YEARS WITHIN THE FIRM:	from 1996			
KEY QUALIFICATION (Relevant to the program)				
	<ul style="list-style-type: none"> <li>- Fuel, Gas and Electric supply of industrial consu</li> <li>- Project manager of heat and fuel projects</li> <li>- Project manager of heat and fuel projects</li> <li>- Optimization and utilization of industrial furnace; and heat plants</li> </ul>			
PROFESIONAL EXPERIENCE				
	1995-2000: Private consultant on the field of energy sector 1982-1995: metal works engineer, Director of energy sector in Iron and Steel Work "RZS"-Skopje, President of he Initiative team for Gas supply of Macedonia 1979-1981: Director R & D steel plant "Tito" -Skopje 1998-1999: Consultant in Bechtel's project "Diversification of Gas Supply in Albania, Bosnia-Herzegovina, Bulgaria, FYROM and Romania			

PUBLICATIONS:	
	<ul style="list-style-type: none"><li>- Combined utilization of natural gas and other types of fuels in industry</li><li>- Gas supply optimization in Steel Work "RZS"-Skopje</li><li>- Possibilities of gas supply in Kosovo region with natural; gas through Macedonia</li><li>- Optimization of burning process in industrial furnaces</li><li>- Reconstruction of heat plant in RZS-Skopje - Utilization of burning products for production of :team</li></ul>

A. Tomoski

Skopje, 25.07.2000

1. Family name:	Ha.dzi-Misev
2. First names:	Dim.itar
3. Date of birth:	
4. Nationality:	Macedonian
5. Civil status:	Married
6. Education:	
University:	Faculty of Mechanical engineering
Direction:	Thermoenergetics
Post graduate studies:	Faculty of Mechanical Engineering - Belgrade "Dynamics of temperature changes in the fuel element of the nuclear reactor with an active system of accidental cooling"
Doctoral studies:	Faculty of Mechanical Engineering - Skopje "Dynamics of temperature changes in the fuel element of the nuclear reactor with an active system of accidental cooling"
Study scholarship for the doctoral studies:	Moscow Energy Institute (MEI) time period: September 1955 - May 1986

7. Language skills: (Mark 1 to 5 for competence)

<i>Language</i>	<i>Reading</i>	<i>Speaking</i>	<i>Writing</i>
Russian	Excellent	Very Good	Very Good
English	Good	Good	Good

8. Membership of professional bodies:

ZEMAK - Association of Energy Experts of the Republic of Macedonia

9. Other skills: (e.g. Computer literacy, etc.) MS Windows, Word, Excel, Access, Fortran

10. Present position: General Director of  
Toplifkacija AD - Skopje  
the district heating company of Skopje Macedonia

11. Years with the firm: 20

12. Key qualifications: As a technical director and a general director I have worked on a number of issues and aspects of heat production and supply, especially in the field of fuels, ecology, ~ production and Technology, etc. Having in mind that our company Toplifkacija has always had a significant role in all energy projects of interest for the whole country, and especially the role which it has had in planning and energy analyses, I have taken part in most general projects which have been carried out in the field of energy in Macedonia. As a scientific worker and one of the important factors of the energy sector, I have participated in the preparation of most state energy plans and analyses made in the past period, among which the State Economic plan for the Energy Sector for the period until 2020. As a consultant I have participated in numerous projects of planning, energy supply, energy efficiency, ecological issues, etc.

The participation in several PHARE projects carried out in Macedonia was on several topics: ecology, general energy planning, energy efficiency (ESCO mechanisms and possibilities). My role in several rather large projects Toplifkacija and other energy companies are implementing has put me in the role of Project manager, carrying out analyses of project management, project financing, feasibility reports, etc.

13. Specific Eastern Countries experience: USSR, Moscow Institute, 10 months  
EGI Institute Budapest Hungary, 1 month  
Standard good relations with most former : FR  
Yugoslavia  
institutes and institutions.

14. Professional Experience Record:

<i>Date: from</i>	1979 - 1999
<i>Location</i>	Skopje
<i>Company</i>	Toplifkacija AD
<i>Position</i>	- Engineer - Technical manager - General Manager
<i>Description</i>	

EKONERG, LTD.

1992 - EKONERG, Energy Research and Environmental Protection Institute, Ltd. – Project Manager

Project Manager on engineering and construction of Power and Cogeneration Plants and Gas Systems.

Consulting activities on construction and reconstruction of Power and Cogeneration Plants and Gas Systems.

Design for steel structures, steam boilers and piping.

Feasibility and Pre-feasibility study of heat and electricity generation in a combined cycle power plants.

Quality Assurance and surveillance activities.

Surveillance activities during maintenance of Nuclear Power Plant Krško.

Environmental Impact Assessment Study for a combined cycle power plant.

Eddy current inspections of heat exchanger tubing steam generators, condensers, heat exchangers.

1989. – 1992. Institut za elektroprivredu, Thermal Power Systems Division

Consulting services during Thermal Power Plant construction.

Planning and follow-up all activities during Thermal Power Plant construction.

Eddy Current inservice inspection of NPP Krško-Slovenia and NPP Kozloduy-Bulgaria steam generators.

Quality control during pipe plugging activities of NE Kozloduy-Bulgaria and NE Krško-Slovenia steam generators.

Quality control during heat treatment activities on tubes in steam generators of NE Krško-Slovenia.

1987. - 1989. TPK-EPO, Factory of Steam Boilers, Department for energetic and processing plant design and construction, Zagreb

Design, construction and calculations of steam boilers.

Main experience:

Engineering and construction activities during installation of power plants and gas facilities.

Design of steel structures, steam boilers and piping.

Study work on energy systems and Environmental Impact Assessment Study.

Feasibility study.

Consulting activities during bidding proces, construction, and follow up of Thermal Power Plants.

Eddy current inspections of heat exchanger tubing steam generators, condensers, heat exchangers.

Published seven original articles and participated in number of studies and inspection reports.

Membership:

Croatian Energy Society

Croatian Society for Nondestructive Testing



## CURRICULUM VITAE

Name: **Zlatko Komerički**

Date of birth: [REDACTED]

Company:

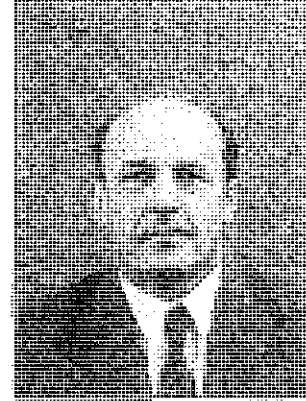
**EKONERG, Ltd.**

Phone: ++385 1/6322-453

Fax: ++385 1/61-71-158

E-mail: zkomic@ekonerg.hr

Address: Ulica grada Vukovara 37  
10 000 Zagreb, Croatia



Position: Adviser, Thermal Power Systems

Education: 1970. B.Sc.Mech.Eng. - Faculty of Mechanical Engineering and Naval Architecture, University of Zagreb, Croatia.  
1980. M.Sc. - Technical Science University of Zagreb, Croatia.

Academic title: M. Sc. Mech. Eng. - Scientific Assistant

Specific education: 1978, Registered Professional Engineer Republic of Croatia, Zagreb

Foreign languages: English, German

Professional history: **1970. – 1972. TPK, Zagreb (Steam Boilers Factory).**

Conceptual and detailed Design, Associate Designer

**1972. – 1992. "Institut za elektroprivredu", Thermal Power Systems Division.**

Energy efficiency and characteristics testing of thermal power plants and industrial power plants.

Study work on energy supply of towns and industrial complexes, with emphasis on District Heating (water and steam) and Gas supply.

**1992. EKONERG - Energy Research and Environmental Protection Institute, Ltd.**

Study work on energy supply and Conceptual Design.

Feasibility study and design of Industrial Cogeneration Power Plants.

Main experience:

Study work on energy supply of towns and industry  
Feasibility study of Industrial Cogeneration Power Plants

Design coordinator on construction of Industrial Cogeneration Power Plants  
District Heating (water and steam)  
Gas supply  
Energy Plant Reconstruction (Conceptual and Detailed Design)

Published over twenties original articles and participated in number of studies.

Membership:           Member of Croatian Energy Society

## PROJECTS, STUDIES:

1. Study for usage of low temperature condensate for greenhouse production in TPP "Negotino", 1997, Skopje
2. Study for technological and economic justification of processes or improvement of elements in technological process in TPP Negotino, 1997, Skopje
3. Project for drying system for lignites, project, 1997
4. Study for briquetting of lignites in Macedonia, 1997, Skopje
5. Study for potential of wind energy in Republic of Macedonia, 1997, Skopje
6. Project for briquetting plant in "BRIK"-Berovo, 1998
7. Project for drive unit and accessories of the belt conveyor for lignites in open mines, project and realisation, 1998,
8. Study for usage of refuse heat from Iron&Steel Works "Skopje", Internal Publication Iron&Steel Works, Skopje
9. Study for supplying with critical energy in Iron&Steel Works "Skopje" in case of external supplying system breakdown, Skopje
10. Choice of optimal exploitation regimes in integrated thermal-power system Iron&Steel Works "Skopje"-District Heating System "Skopje". Conference on black metalurgy, 1986, Herceg Novi
11. Calculation and construction of heliostats for Solar Power Station, system Pillar, Strojniski Vesnik, Ljubljana
12. High Temperature Solar Systems-system Pillar, Mining institute& Faculty for Mechanical Engineering, Ljubljana.
13. Analyse of working regimes in Central Pumping Station in Iron&Steel Works "Skopje" Skopje
14. Study for choice of optimal type of district heating in Makedonska Kamenica, Skopje, 1987
15. Project for heating and preparing of hot water in mine "Toranica", mechanical project, MI,
16. Project for heating, ventilation and preparing of hot water in mine "Toranica", mechanical project, MI, Skopje
17. Analyses and diagnostics, through frequency analyses, and correction of excessive vibrations in flue gases system in TPP "Bitola", MI, Skopje
18. Analyses and diagnostics, through frequency analyses, and determination of initial forces for excessive vibrations of coal grinder in TPP "Oslomej", MI, Skopje
19. Study and Project for district heating system in Makedonska Kamenica, MI, Skopje
20. Studies, Reports for thermal power equipment ( turbines, generators, pumps etc.) in OHIS. Refinery OKTA, TPP Bitola, TPP Oslomej and other companies, published in MI ( over 50 studies and reports )
21. Scientific Studies, Researches and Projects for Open-mines for lignites in TPP "Bitola", open-mine Suvodol , TPP "Oslomej", "Brik"-Berovo; X41-Skopje
22. Scientific Studies, Researches and Projects for Open-mines for copper "Buchim"-Radovish; MI- Skopje
23. Scientific Studies. Researches and Projects for underground exportation for Sasa.

**BIODATA SHEETS**

**CONTRACTOR EMPLOYEE BIOGRAPHICAL DATA SHEET**

1. Name (Last, First, Middle) Georgiev, Toma		2. Contractor's Name Bechtel National, Inc.	
3. Employee's Address (include ZIP code) Ivel Consult Limited; 56 Svoboda Street; Plovdiv 4002, Bulgaria; e-mail: ivelconsult@plov.omega.bg		4. Contract Number LAG-1-00-98-00006-00	5. Position Under Contract
8. Telephone Number (include area code) +359 32 45 55 05		6. Proposed Salary	7. Duration of Assignment
9. Place of Birth Bulgaria		10. Citizenship (if non-U.S. citizen, give nine states) Bulgarian	

1. Names, Ages, and Relationship of Dependents to Accompany Individual to Country of Assignment  
Not applicable.

12. EDUCATION (include all college or university degrees)				13. LANGUAGE PROFICIENCY		
NAME AND LOCATION OF INSTITUTION	MAJOR	DEGREE	DATE	LANGUAGE	Proficiency Speaking	Proficiency Reading
Law School - Sofia University 1986/90	Law	LJM	10/03/1990	Bulgarian	5/S	5/R
Business Studies - Sofia University 1990/91	Business	MBA	10/01/1991	English	4/S	4/R
				Macedonian	4/S	4/R

14. EMPLOYMENT HISTORY

1. Give last three (3) years. List entries separate for each year. Continue on separate sheet of paper if required to list all employment related to duties of proposed assignment.

2. Salary definition - basic periodic payment for services rendered. Exclude bonuses, profit-sharing arrangements, occasional honoraria fees, extra or overtime work payments, avowance differential or quarters, cost of living or dependent education allowances.

POSITION TITLE	EMPLOYER'S NAME AND ADDRESS POINT OF CONTACT & TELEPHONE #	Dates of Employment (mm/dd/yyyy)		Annual Salary
		From	To	Dollars
Legal and Business Consultant	Ivel Consult; 56 Svoboda St; Plovdiv, Ms. Vracheva 032 455505	02/01/1998	12/31/1999	20,400.00
Legal and Business Consultant	Ivel Consult; 56 Svoboda St; Plovdiv, Ms. Vracheva 032 455505	01/01/1997	01/02/1998	14,500.00

SERVICES PERFORMED	EMPLOYER'S NAME AND ADDRESS POINT OF CONTACT & TELEPHONE #	Dates of Employment (mm/dd/yyyy)		Days at Rate	Daily Rate In Dollars
		From	To		

16. CERTIFICATION: To the best of my knowledge, the above facts as stated are true and correct.

Signature of Employee Toma Georgiev Date 26/07/2000

Contractor certifies in submitting this form that it has taken reasonable steps (in accordance with sound business practices) to verify the information contained in this form. Contractor understands that USAID may rely on the accuracy of such information in negotiating and reimbursing personnel under this contract. The making of certifications that are false, fictitious, or fraudulent, or that are based on inadequately verified information, may result in appropriate remedial action by USAID, taking into consideration all of the pertinent facts and circumstances, ranging from refund claims to criminal prosecution.

Signature of Contractor's Representative \_\_\_\_\_ Date \_\_\_\_\_

**CONTRACTOR EMPLOYEE BIOGRAPHICAL DATA SHEET**

1. Name (Last, First, Middle) Velkov, Ivo		2. Contractor's Name Bechtel National Inc.	
3. Employee's Address (include ZIP code) Ivel Consult Limited; 56 Svoboda Street, Plovdiv 4002, Bulgaria; e-mail: ivelconsult@plov.omega.bg		4. Contract Number LAG-I-00-92-00006-00	5. Position Under Contract
8. Telephone Number (include area code) +359 32 45 55 05		6. Proposed Salary	7. Duration of Assignment
9. Place of Birth Bulgaria		10. Citizenship (If non-U.S. citizen, give date of naturalization) Bulgarian	

11. Names, Ages, and Relationship of Dependents to Accompany Individual to Country of Assignment  
Not applicable.

12. EDUCATION (include all college or university degrees)				13. LANGUAGE PROFICIENCY		
NAME AND LOCATION OF INSTITUTION	MAJOR	DEGREE	DATE	LANGUAGE	Proficiency Speaking	Proficiency Reading
Sofia Engineering and Architectural University, Bulgaria, 1990/1995	Architecture	MSc	05/10/1995	Bulgarian	3/S	5/R
				English	4/S	4/R
				Macedonian	4/S	4/R

14. EMPLOYMENT HISTORY

1. Give last three (3) years. List salaries separately for each year. Continue on separate sheet of paper if required to list all employment related to duties of proposed assignment.

2. Salary definition - basis periodic payment for services rendered. Exclude bonuses, profit-sharing arrangements, commissions consultant fees, extra or overtime work payments, overseas differential or quarters, cost of living or dependent education allowances.

POSITION TITLE	EMPLOYER'S NAME AND ADDRESS POINT OF CONTACT & TELEPHONE #	Dates of Employment (mm/dd/yyyy)		Annual Salary Dollars
		From	To	
Architecture and Energy Efficiency Specialist	Ivel Consult; 56 Svoboda St; Plovdiv; Ms. Vracheva 032 455505	01/01/1998	12/31/1999	9,500.00
Architecture and Energy Efficiency Specialist	Ivel Consult; 56 Svoboda St; Plovdiv; Ms. Vracheva 032 455505	01/01/1997	01/01/1998	7,200.00

15. SPECIFIC CONSULTANT SERVICES (give last three (3) years)

SERVICES PERFORMED	EMPLOYER'S NAME AND ADDRESS POINT OF CONTACT & TELEPHONE #	Dates of Employment (mm/dd/yyyy)		Days at Rate	Daily Rate In Dollars
		From	To		

16. CERTIFICATION: To the best of my knowledge, the above facts as stated are true and correct.

Signature of Employee: *Ivo Velkov* Date: *25/07/2000*

Contractor certifies in submitting this form that it has taken reasonable steps (in accordance with sound business practices) to verify the information contained in this form. Contractor understands that USAID may rely on the accuracy of such information in negotiating and reimbursing personnel under this contract. The making of certifications that are false, fictitious, or fraudulent, or that are based on inadequately verified information, may result in appropriate remedial action by USAID, taking into consideration all of the pertinent facts and circumstances, ranging from refund-claims to criminal prosecution.

Signature of Contractor's Representative: \_\_\_\_\_ Date: \_\_\_\_\_

AID 1420-17 (4/95)

GMB Control No. 0412-0630; Expiration Date 06/01/2000

**CONTRACTOR EMPLOYEE BIOGRAPHICAL DATA SHEET**

1. Name (Last, First, Middle) Lazarov, Lazer		2. Contractor's Name Bechtel National, Inc.	
3. Employee's Address (include ZIP code) Ivel Consult Limited; 56 Svoboda Street; Plovdiv 4002, Bulgaria; e-mail: ivelconsult@plov.omega.bg		4. Contract Number LAG-1-00-98-00006-00	5. Position Under Contract
8. Telephone Number (include area code) +359-32 45 55 05		6. Proposed Salary	7. Duration of Assignment
9. Place of Birth Bulgaria		10. Citizenship (If non-U.S. citizen, give nationality) Bulgarian	

11. Names, Ages, and Relationship of Dependents to Accompany Individual to Country of Assignment  
Not applicable:

12. EDUCATION (include all college or university degrees)				13. LANGUAGE PROFICIENCY		
NAME AND LOCATION OF INSTITUTION	MAJOR	DEGREE	DATE	LANGUAGE	Proficiency Speaking	Proficiency Reading
Technical University, Sofia	Energy Engine	MSc	10/14/1977	Bulgarian	3/S	5/R
				English	3/S	3/R
				Macedonian	4/S	4/R

14. EMPLOYMENT HISTORY

1. Give last three (3) years. List salaries separate for each year. Continue on separate sheet of paper if required to list all employers related to duties of proposed assignment.

2. Salary definition - base periodic payment for services rendered. Exclude bonuses, profit-sharing arrangements, commissions, overtime fees, extra or overtime work payments, overseas differential or quarters, cost of living, or dependent education allowances.

POSITION TITLE	EMPLOYER'S NAME AND ADDRESS POINT OF CONTACT & TELEPHONE #	Date of Employment (mm/dd/yyyy)		Annual Salary
		From	To	Dollars
Senior Consultant in HVACR and energy efficiency	Ivel Consult; 56 Svoboda Street; Plovdiv; Mrs. Vrasheva +359 32	07/01/1999	12/31/1999	6,500.00
Utilities Manager	Fintex Textile Factory	01/01/1997	12/11/1998	6,000.00

15. SPECIFIC CONSULTANT SERVICES (give last three (3) years)

SERVICES PERFORMED	EMPLOYER'S NAME AND ADDRESS POINT OF CONTACT & TELEPHONE #	Date of Employment (mm/dd/yyyy)		Days at Rate	Daily Rate In Dollars
		From	To		

16. CERTIFICATION: To the best of my knowledge, the above facts as stated are true and correct.

Signature of Employee *L. Lazarov* Date *25.07.2000*

Contractor certifies in submitting this form that it has taken reasonable steps (in accordance with sound business practices) to verify the information contained in this form. Contractor understands that USAID may rely on the accuracy of such information in negotiating and reimbursing personnel under this contract. The making of certifications that are false, fictitious, or fraudulent, or that are based on inadequately verified information, may result in appropriate remedial action by USAID, taking into consideration all of the pertinent facts and circumstances, ranging from refund claims to criminal prosecution.

Signature of Contractor's Representative \_\_\_\_\_ Date \_\_\_\_\_

OMB Control No. 0412-0530; Expiration Date: 08/31/2000

**CONTRACTOR EMPLOYEE BIOGRAPHICAL DATA SHEET**

1. Name (Last, First, Middle) Grasin Vasile		2. Contractor's Name Bechtel National, Inc.	
3. Employee's Address (include ZIP code) 26, Anton Pann Str., 3400 Cluj Napoca, Romania		4. Contract Number LAG-1-00-98-00006-00	5. Position Under Contract
		6. Proposed Salary	7. Duration of Assignment
8. Telephone Number (include area code) 004064135977	9. Place of Birth Sacalala, County of Cluj	10. Citizenship (if non-U.S. citizen, give visa status) Romanian - B1/B2 US Visa	

11. Names, Ages, and Relationship of Dependents to Accompany Individual to Country of Assignment  
Not applicable.

12. EDUCATION (include all college or university degrees)				13. LANGUAGE PROFICIENCY		
NAME AND LOCATION OF INSTITUTION	MAJOR	DEGREE	DATE	LANGUAGE	Proficiency Scale	Proficiency Date
Cluj Electrotechnical Faculty				English	2/3	1/98

**14. EMPLOYMENT HISTORY**

- Give last three (3) years. List salaries separate for each year. Continue on separate sheet of paper if required to list all employment related to duties of proposed assignment.
- Salary definition - basic periodic payment for services rendered. Exclude bonuses, profit-sharing arrangements, commissions, consultant fees, extra or overtime work payments, overseas differential or quarters, cost of living or dependant education allowances.

POSITION TITLE	EMPLOYER'S NAME AND ADDRESS POINT OF CONTACT & TELEPHONE #	Dates of Employment (mm/dd/yyyy)		Annual Salary
		From	To	Dollars
Director	Eco-Erg Tehn. Serv., 26, Anton Pann Str., 3400 Cluj, Tel. Fax: 004064432304	01/01/1997	12/31/1999	4,800.00

**15. SPECIFIC CONSULTANT SERVICES (give last three (3) years)**

SERVICES PERFORMED	EMPLOYER'S NAME AND ADDRESS POINT OF CONTACT & TELEPHONE #	Dates of Employment (mm/dd/yyyy)		Days at Rate	Daily Rate in Dollars
		From	To		
Energy audit at dairy and milk products in Tg. Mures and Ludus	Nifes Consulting Group, North Court 83 Northwood Str., St. Paul's	06/16/1997	10/31/1997	22	60.00
Feasibility study for electric and thermal energy efficiency improvements at a brewery	S.C. Uraus S.A., Motilor Str., Nr. 2-6, 3400 Cluj Napoca, Tel. 004064430207	10/01/1997	10/31/1998	260	55.60
Feasibility study for energy monitoring and data acquisition system at a cement plant	S.C. Romcim S.A., Str. Fabricii Nr. 1, 3375 Alesd. Jud. Bihor, Tel. 004059340828	01/05/1998	02/03/1998	40	73.00
Design for fuel, energy meter, water monitoring and data acquisition system at a cement plant	S.C. Romcim S.A., Str. Fabricii Nr. 1, 3375 Alesd. Jud. Bihor, Tel. 004059340828	12/05/1998	01/15/1999	30	96.00
Feasibility study on energy efficiency improvements at Medgidia, Tg. Jiu and Hoghiz cement plants	S.C. Lafarge Romcim S.A., Bucurasi, Rada Calomfirescu Str. Nr. 8, Tel. 004013150936	06/15/1999	01/31/2000	163	110.00
Feasibility study on energy efficiency improvements at a ready-made clothes plant	S.C. Arges S.A., 3400 Cluj Napoca, Str. Galati Nr. 20-24, Tel. 004064193392	06/01/2000	07/20/2000	25	140.00

16. CERTIFICATION: To the best of my knowledge, the above facts as stated are true and correct.

Signature of Employee  Date 07/24/2000

Contractor certifies in submitting this form that it has taken reasonable steps (in accordance with sound business practices) to verify the information contained in this form. Contractor understands that USAID may rely on the accuracy of such information in negotiating and reimbursing personnel under this contract. The making of certifications that are false, fictitious, or fraudulent, or that are based on inadequately verified information, may result in appropriate remedial action by USAID, taking into consideration all of the pertinent facts and circumstances, ranging from refund claims to criminal prosecution.

Signature of Contractor's Representative \_\_\_\_\_ Date \_\_\_\_\_

AID 1420-17 (4/95)



OMB Control No. 0412-0520; Expiration Date: 08/31/2008

**CONTRACTOR EMPLOYEE BIOGRAPHICAL DATA SHEET**

1. Name (Last, First, Middle) Padureanu Georgeta Elisabeta		2. Contractor's Name Bechtel National, Inc.	
3. Employee's Address (include ZIP code) B-dul N.Tituлесcu, Nr.20, Bl.p9, Ap.23, 3400 Cluj Napoca, Romania		4. Contract Number LAG-I-00-98-00006-00	5. Position Under Contract
8. Telephone Number (include area code) 004064157632		6. Proposed Salary	7. Duration of Assignment
9. Place of Birth Cluj Napoca		10. Citizenship (If non-U.S. citizen, give visa status) Romanian - B1/B2 US Visa	

1. Names, Ages, and Relationship of Dependents to Accompany Individual to Country of Assignment  
Not applicable.

12. EDUCATION (include all college or university degrees)				13. LANGUAGE PROFICIENCY		
NAME AND LOCATION OF INSTITUTION	MAJOR	DEGREE	DATE	LANGUAGE	Proficiency Speaking	Proficiency Reading
"Babes Bolyai" University of Cluj - Physics Faculty, Pedagogical Seminar	Physics	BSc	June, 1977	Romanian	5/S	5/R
"Babes Bolyai" University of Cluj - Physics Faculty, Nuclear Physics	Nuclear Science	MSc	03/08/1979	English	3/S	3/R
				Hungarian	3/S	2/R

**14. EMPLOYMENT HISTORY**

- Give last three (3) years. List salaries separate for each year. Continue on separate sheet of paper if required to list all employment related to duties of proposed assignment.
- Salary definition - basic periodic payment for services rendered. Exclude bonuses, profit-sharing arrangements, commissions consultant fees, extra or overtime work payments, overseas differential or quarters, cost of living or dependent education allowances.

POSITION TITLE	EMPLOYER'S NAME AND ADDRESS POINT OF CONTACT & TELEPHONE #	Dates of Employment (mm/dd/yyyy)		Annual Salary
		From	To	Dollars
Director	Eco-Erg Techn. Serv., 26, Anton Pann Str., 3400 Cluj, Tel. Fax: 004064432304	01/01/1997	12/31/1999	4,800.00

**15. SPECIFIC CONSULTANT SERVICES (give last three (3) years)**

SERVICES PERFORMED	EMPLOYER'S NAME AND ADDRESS POINT OF CONTACT & TELEPHONE #	Dates of Employment (mm/dd/yyyy)		Days at Rate	Daily Rate in Dollars
		From	To		
Energy audit at dairy and milk products in g. Mures and Ludus	Nifes Consulting Group, North Court 85 Northwood Str., St. Paul's	06/16/1997	10/31/1997	22	60.00
Feasibility study for electric and thermal energy efficiency improvements at a brewery	S.C. Urmas S.A., Moutier Str., Nr. 2-6, 3400 Cluj Napoca, Tel. 004064430207	10/01/1997	10/31/1998	260	55.60
Feasibility study for energy monitoring and data acquisition system at a cement plant	S.C. Romcim S.A., Str. Fabricii Nr. 1, 3575 Ajosd, Jud. Bihor, Tel. 004059340828	01/05/1998	02/05/1998	40	73.00
Design for fuel, energy meter, water monitoring and	S.C. Romcim S.A., Str. Fabricii Nr. 1, 3575 Ajosd, Jud. Bihor, Tel. 004059340828	02/05/1998	02/05/1998	40	73.00
Feasibility study on energy efficiency improvements at a ready-made clothes plant	S.C. Argos S.A., 3400 Cluj Napoca, Str. Calati Nr. 20-24, Tel. 004064195292	06/01/2000	07/20/2000	25	140.00

16. CERTIFICATION: To the best of my knowledge, the above facts as stated are true and correct.

Signature of Employee: *Georgeta Padureanu* Date: 07/24/2000

Contractor certifies in submitting this form that it has taken reasonable steps (in accordance with sound business practices) to verify the information contained in this form. Contractor understands that USAID may rely on the accuracy of such information in negotiating and reimbursing personnel under this contract. The making of certifications that are false, fictitious, or fraudulent, or that are based on inadequately verified information, may result in appropriate remedial action by USAID, taking into consideration all of the pertinent facts and circumstances, ranging from refund claims to criminal prosecution.

Signature of Contractor's Representative: \_\_\_\_\_ Date: \_\_\_\_\_

24-JUL-00 13:42

BORIS PETKOV

202  
P. 02

OSIA Control No. 0012 0020; Expiration Date: 06/31/2000

**CONTRACTOR EMPLOYEE BIOGRAPHICAL DATA SHEET**

1. Name (Last, First, Middle) <b>Tomoski Aleksandar (Zivko)</b>		2. Contractor's Name <b>Bechtel National, Inc.</b>	
3. Employee's Address (include ZIP code) <b>Energetic Association of Macedonia - ZEMAC P.R. 139 FIR MACEDONIA - SKOPJE</b>		4. Contract Number <b>LAG-1-00-98-00006-00</b>	5. Position Under Contract
8. Telephone Number (include area code) <b>389-91-218601</b>		9. Place of Birth <b>SKOPJE Macedonia</b>	10. Citizenship (If non-U.S. citizen, give one name) <b>Macedonia</b>

6. Proposed Salary 7. Description of Assignment

11. EDUCATION (include all college or university degrees)

NAME AND LOCATION OF INSTITUTION	MAJOR	DEGREE	DATE	LANGUAGE	Proficiency writing	Proficiency reading
<b>Faculty of mechanical engineering - Skopje</b>		<b>BSc</b>	<b>1965</b>	<b>English</b>	<b>US 3</b>	<b>2R 4</b>
				<b>Serbian/Croatian</b>	<b>US 5</b>	<b>2R 5</b>
				<b>Bulgarian</b>	<b>US 5</b>	<b>2R 5</b>

12. Names, Ages, and Relationship of Dependents to Accompany Individual to Country of Assignment  
Not applicable.

13. LANGUAGES/PROFICIENCY

14. EMPLOYMENT HISTORY

1. Give last three (3) years. List salaries separate for each year. Continue on separate sheet of paper if required to list all employment related to dates of proposed assignment.

2. Salary in Dollars = basic periodic payments for services rendered. Exclude bonuses, profit-sharing arrangements, commissions or such as from extra or overtime work performed, overtime differential or quarters, cost of living or dependency allowance allowances.

POSITION TITLE	EMPLOYER'S NAME AND ADDRESS POINT OF CONTACT & TELEPHONE #	Dates of Employment (mm/dd/yyyy)		Annual Salary
		From	To	Dollars
<b>Private consultant</b>	<b>DiDaco - Skopje</b>	<b>1995</b>	<b>2000</b>	<b>10,000</b>

15. SPECIFIC CONSULTANT SERVICES (give last three (3) years)

SERVICES PERFORMED	EMPLOYER'S NAME AND ADDRESS POINT OF CONTACT & TELEPHONE #	Dates of Employment (mm/dd/yyyy)		Days at Rate	Daily Rate in Dollars
		From	To		
<b>Consultant</b>	<b>Bechtel Consulting - 4524/00</b>	<b>1999</b>	<b>1999</b>		<b>120</b>

16. CERTIFICATION: To the best of my knowledge, the above facts are true and correct.

Signature of Employee: *[Signature]* Date: **25.07.2000**

Contractor certifies in submitting this form that it has taken reasonable steps (in accordance with sound business practice) to verify the information contained in this form. Contractor understands that USAID may rely on the accuracy of such information in negotiating and reimbursing personnel under this contract. The making of certifications that are false, fictitious, or fraudulent, or that are based on inadequate or unverified information, may result in appropriate remedial action by USAID, taking into consideration all of the pertinent facts and circumstances, ranging from refund claims to criminal prosecution.

Signature of Contractor's Representative: \_\_\_\_\_ Date: \_\_\_\_\_

ONR Contract No. 0012-9520; Expiration Date: 04/31/2000

**CONTRACTOR EMPLOYEE BIOGRAPHICAL DATA SHEET**

1. Name (Last, First, Middle) <b>Kacurkov George</b>		2. Contractor's Name <b>Hechtel National, Inc.</b>	
3. Employee's Address (include ZIP code) <b>Rudarski institut-energetica (mining institute-energy) Bul. J. Sandanski 113 Macedonia, 5100 Skopje</b>		4. Contract Number <b>LAG-I-00-94-00006-00</b>	5. Position Under Contract
8. Telephone Number (include area code) <b>389-91/451-023 Fax: -1-1497-631</b>		9. Place of Birth <b>Strumica Macedonia</b>	10. Citizenship (If not U.S. citizen, give its name) <b>MACEDONIA</b>

11. Names, Ages, and Relationship of Dependents to Accompany Individual to Country of Assignment  
Not applicable.

12. EDUCATION (include all college or university degrees)				13. LANGUAGE PROFICIENCY		
NAME AND LOCATION OF INSTITUTION	MAJOR	DEGREE	DATE	LANGUAGE	Proficiency Ranking	Proficiency Rating
Faculty of mechanical engineering - Skopje		BSC		English	3 4	2/R 5
Faculty of mechanical engineering - Ljubljana		MSc		Serbian/Croatian	3 5	2/R 5
				Bulgarian	3 4	2/R 4

14. EMPLOYMENT HISTORY

1. Give last three (3) years. List salaries separate for each year. Contract on separate sheet of paper if required to list all employment related to dates of proposed assignment.

2. Salary definition - base periodic payments for services rendered. Exclude bonuses, profit-sharing arrangements, commissions, social or health care or overtime work payments, over seas differential or quarters, cost of living or dependent relocation allowances.

POSITION TITLE	EMPLOYER'S NAME AND ADDRESS POINT OF CONTACT & TELEPHONE #	Dates of Employment (mm/dd/yyyy)		Annual Salary
		From	To	Dollars
Executive manager	Rudarski Institut - Skopje	1990	2000	15,000

15. SPECIFIC CONSULTANT SERVICES (give last three (3) years)					
SERVICES PERFORMED	EMPLOYER'S NAME AND ADDRESS POINT OF CONTACT & TELEPHONE #	Dates of Employment (mm/dd/yyyy)		Days as Rate	Daily Rate in Dollars
		From	To		
Consultant	LMZ - Petersburg RUSIA	1990	2000		140
	ESM - Macedonia	1995	2000		140

16. CERTIFICATION: To the best of my knowledge, the above facts as stated are true and correct.

Signature of Employee *George Kacurkov* Date **25/07, 2000**

Contractor certifies in submitting this form that it has taken reasonable steps (in accordance with sound business practice) to verify the information contained in this form. Contractor understands that USAID may rely on the accuracy of such information in negotiating and reimbursing personnel under this contract. The making of certifications that are false, fictitious, or fraudulent, or that are based on inadequate or unverified information, may result in appropriate remedial action by USAID, taking into consideration all of the pertinent facts and circumstances, ranging from refund claims to criminal prosecution.

Signature of Contractor's Representative \_\_\_\_\_ Date \_\_\_\_\_

ONLS Control No. 001-04201-Expiration Date: 08/31/2000

**CONTRACTOR EMPLOYEE BIOGRAPHICAL DATA SHEET**

1. Name (Last, First, Middle) HADZI-MISEV, DIMITAR		2. Contractor's Name Beehid National Inc.	
3. Employee's Address (include ZIP code) TOPLIFIKACIJA AD-SKOPJE DISTRICT HEATING OF SKOPJE UL. LONDONSKA BB 1000 SKOPJE, R. MACEDONIA		4. Contract Number LAG-I-00-98-00006-06	5. Position Under Contract
8. Telephone Number (include area code) ++ 389-91-363630 TEL. ++ 389-91-376057 FAX		9. Place of Birth STRUMICA MACEDONIA	10. Citizenship (If not U.S. citizen, give name) MACEDONIA.

11. Names, Ages, and Relationship of Dependents to Accompany Individual to Country of Assignment  
Not applicable. —

12. EDUCATION (include all college or university degrees)				13. LANGUAGE PROFICIENCY		
NAME AND LOCATION OF INSTITUTION	MAJOR	DEGREE	DATE	LANGUAGE	Proficiency Speaking	Proficiency Reading
FACULTY OF MECHANICAL ENGINEERING, SKOPJE		B.Eng		ENGLISH	2S 4	2R 4
FACULTY OF MECHANICAL ENGIN., 3RD GRADE, BERNAR JUKOV		M.Eng		RUSSIAN	2S 5	2R 5
MEI, MOSCOW, RUSSIA		Dr. Sci.		Secondly Official BULGARIAN	2S 5 4	2R 5 4

**14. EMPLOYMENT HISTORY**

1. Give last three (3) years. List salaries separate for each year. Continue on separate sheet of paper if required to list all employment related to duties of proposed assignment.  
2. Salary definition - base periodic payment for services rendered. Exclude bonuses, profit-sharing arrangements, commissions, overtime pay, fees, costs or overtime work payments, overhead differential or quarters cost of living or dependent education allowances.

POSITION TITLE	EMPLOYER'S NAME AND ADDRESS POINT OF CONTACT & TELEPHONE #	Dates of Employment (month/day/year)		Annual Salary Dollars
		From	To	
GENERAL DIRECTOR	TOPLIFIKACIJA AD-SKOPJE TEL: ++389 91-363630	1980	TODAY	15,000

**15. SPECIFIC CONSULTANT SERVICES (give last three (3) years)**

SERVICES PERFORMED	EMPLOYER'S NAME AND ADDRESS POINT OF CONTACT & TELEPHONE #	Dates of Employment (month/day/year)		Daily Rate In Dollars
		From	To	
CONSULTANT	PHARE - REVIEW OF ENERGY LEGISLATURE	1998	1999	160
CONSULTANT	NATIONAL ENERGY PLAN LONG-TERM	1997	1998	140
CONSULTANT	PHARE - ENERGY EFFICIENCY	1998	1999	160

**16. CERTIFICATION:** To the best of my knowledge, the above facts as stated are true and correct.

Signature of Employee: *M. Hadzi-Misev* Date: 25.07.2000

Contractor certifies in submitting this form that it has taken reasonable steps (in accordance with sound business practices) to verify the information contained in this form. Contractor understands that USAID may rely on the accuracy of such information in negotiating and reimbursing personnel under this contract. The making of certifications that are false, fictitious, or fraudulent, or that are based on inadequate or verified information, may result in appropriate remedial action by USAID, taking into consideration all of the pertinent facts and circumstances, ranging from refund claims to criminal prosecution.

Signature of Contractor's Representative: \_\_\_\_\_ Date: \_\_\_\_\_



**CONTRACT NO. LAG-I-00-98-00006-00  
SOUTHEAST EUROPE ENERGY EFFICIENCY PROJECT**

<b>TECHNICAL SPECIALISTS</b>					
Labor Category Title	Labor Category #	Level 1= Sr; 2= Mid 3= Jr.	FBDR Daily Rate	Staff Days	Cost
<b>Task Manager</b>					
Energy Efficiency	3	1	\$ 979.00	42	\$ 41,118
Energy Efficiency (Option Period)	17	1	\$ 1,038.00	210	\$ 217,980
<b>Short Term Advisor (By Labor Categories)</b>					
Engineering (Option Period)	18	1	\$ 961.00	104	\$ 99,944
Trade, Finance & Devel. (Option Period)	21	1	\$ 1,120.00	40	\$ 44,800
Economist (Option Period)	20	1	\$ 938.00	21	\$ 19,698
Trade, Finance & Devel. (Option Period)	21	2	\$ 877.00	44	\$ 38,588
Engineering (Option Period)	18	1	\$ 961.00	22	\$ 21,142
Workshop, Admin, Tech editing	14	3	\$ 337.00	30	\$ 10,110
Workshop, Admin, Tech editing (Option Period)	28	3	\$ 360.00	230	\$ 82,800
Training & HR (Option Period)	27	1	\$ 902.00	44	\$ 39,688
Trade, Finance & Devel. (Option Period)	21	2	\$ 877.00	41	\$ 35,957
Energy Efficiency	3	1	\$ 269.46	42	\$ 11,317
Energy Efficiency (Option Period)	17	1	\$ 271.13	572	\$ 155,085
Law/Regulatory (Option Period)	16	1	\$ 259.10	42	\$ 10,882
Training & HR (Option Period)	27	1	\$ 902.00	42	\$ 37,884
Workshop, Admin, Tech editing (Option Period)	28	3	\$ 104.28	150	\$ 15,642
Trade, Finance & Devel. (Option Period)	21	1	\$ 1,120.00	20	\$ 22,400
<b>Total Direct Labor</b>				<b>1,696</b>	<b>\$ 905,036</b>
<b>OTHER DIRECT COSTS</b>					
<b>Bechtel / Nexant</b>					
Office Rental & Utilities				\$	-
Communications (DHL, Mail, Phone, Fax)				\$	11,550
Reproduction Expenses				\$	2,000
Medvac Insurance				\$	2,646
DBA Insurance				\$	370
<b>SubTotal =</b>				\$	<b>16,566</b>
<b>Bechtel / Nexant Materials, Supplies and Translation Other Direct Costs</b>					
Energy Efficiency Equipment				\$	50,000
Miscellaneous Office Supplies				\$	4,200
<b>SubTotal =</b>				\$	<b>54,200</b>
<b>Total Bechtel ODC's</b>				\$	<b>70,766</b>
<b>TRAVEL</b>					
<b>Bechtel / Nexant</b>					
Airfare & Ground Transportation To & From Airport				\$	40,000
Lodging				\$	83,520
Meals				\$	39,200
Local Transportation				\$	7,200
<b>Total Travel Bechtel</b>				\$	<b>169,920</b>
<b>SUBCONTRACTOR COSTS (Travel, Equipment, Other Direct Costs)</b>					
<b>IIEC</b>					
Airfare & Ground Transportation To & From Airport				\$	-
Lodging				\$	-
Meals				\$	-
Other Direct Costs (ODCs)				\$	3,923
Local Transportation				\$	-
<b>Total Travel &amp; ODC Subcontractor</b>				\$	<b>3,923</b>
<b>Total ODC's Subject To G&amp;A Bechtel</b>		<b>Amount</b>	<b>G&amp;A Rate</b>		
		\$ 186,486	27.00%	\$	50,351
<b>Total ODC's Subject To G&amp;A IIEC</b>		\$ 3,923	0.00%	\$	-
				\$	<b>50,351</b>
<b>Grand Total</b>				\$	<b>1,199,996</b>

Bechtel makes no changes to the proposed Statement of Work, except that our Cost Proposal modifies USAID's recommended labor allocation by shifting 12 person-months of labor from the Junior Administrative category to the In-Country Labor category. The resulting total for In-Country Labor is 36 person-months, while the Junior Administrative category is proposed as 12 person-months.

We believe that this change will provide more value to USAID in the form of additional program implementation in-country, without compromising project logistics, reporting, or other administrative functions associated with the recommended Administrative role. However, if USAID prefers that a greater administrative labor content is truly necessary for the project, we have no objection to revising the proposed shift.

# SECTION 5

# TIME SCHEDULE

SE Europe Energy Efficiency Project																									
Illustrative Project Schedule																									
	Months																								
Tasks	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
0 Work Plan	█																								
1 Commercial Demonstration Projects																									
Project Identification	█	█																							
Prefeasibility Studies			█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
Prepare Business Plans										◆															
Obtain Financial Approval																									
2 Development of Replicable Programs																									
Design Procurement Structure		█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
Identify/Assess Bankable Projects																									
Prepare Business Plans																									
Develop Funding Sources																									
Assist Munis: Plans to Lenders																									
3 Private ESCO Project Financing																									
Identify/Assess Bankable Projects																									
Prepare Business Plans																									
Assist Sponsors to Obtain Financing																									
Monitor Implementation and M&V																									
4 Regional Financing Mechanisms																									
Develop Lenders Forum		█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
Define Structure with Lenders																									
Develop Prototypes, Financing Criteria																									
Assess Projects																									
Present Project Portfolio to ESCOs																									
5 Rollout of Municipal Programs																									
Romania Program Rollout																									
Conceptual Program Design		█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
Resource Planning/Counterpart Development																									
Definition of Administrative Procedures																									
Develop Financial Resources																									
Promotion Planning																									
Presentation of Rollout Plan to USAID																									
Implementation Support																									
Program Design in 2nd Country																									
6 Training, Inst'l Building & Leg. Initiatives																									
Design Training Plan		█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
Periodic Support Activities																									

◆ Deliverable presented to USAID