



GG INTERNATIONAL

Energy Projects

Energy Projects

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Project Name:	Coal, Energy Generation, Transport Business Restructuring					
Name of Client:	Government of Mongolia					
Country:	Mongolia	Project location within a country:			Ulaanbaatar and regions	
Participation:	✓ As lead firm					
	As associate firm					
Value of Services:		(US\$)				
Source of Financing:	New Zealand Government Asian Development Assistance Fund (ADAF), Stafford House, 40 The Terrace, Wellington, NZ					
Project Type:	Consultancy Services	The number of staff:		2	No. of person months:	4
	Length of Consultancy Assignment:		4 (intermittent)		months	
	Start date:	April-1998	Completion date:		Mar-2000	
Associate Firms:	None.					
Name of senior staff:	Hon. David Butcher (Energy and Business Management Planning expert) and John Third (Energy, Electricity trading, and Coal Agency expert)					

Challenges

Mongolia faced critical challenges in electricity generation, coal extraction, and rail transport. The country's coal-fired power stations were the sole providers of electricity and heat for most of its population, making them vital to Mongolia's infrastructure. Through the Ministry of Energy and Coal Agency, the Government of Mongolia sought to develop a medium-term business strategy for its State-Owned Coal Agency and Coal-Fired Electricity Stations. The coal agency was central to all coal mining operations in Mongolia's centrally planned economy, and its power stations depended on reliable coal transport. Inefficiencies in rail transport, hazardous coal dust issues, and inadequate management structures compounded the situation, threatening power generation and public service delivery.

Strategy

The team conducted a comprehensive on-the-ground review of the business operations of both the State Coal Agency and State Power Generation entities to address these challenges. They identified key issues, including ownership structure, governance, and operational inefficiencies. The strategy focused on three core tasks:

- Railway Transport Plan:** This plan aimed to optimize coal transport to the power plants, addressing single-track rail line constraints and on-site storage issues. It also included steps to mitigate the hazardous coal dust problem.
- Strategic Business Plans:** The team developed these plans for both the Coal Agency and State-Owned Energy Generators, covering all functional areas, including marketing, operations, HR, financial management, and R&D. They also created additional plans for external financing, capacity development (with key performance indicators), and cash management, focusing on efficient tariff setting and debt management.

3. **Stakeholder Engagement:** The team consulted with government agencies and key stakeholders alongside seminars in Ulaanbaatar. They incorporated feedback from these engagements into the final strategic recommendations.

Transformation

Implementing these recommendations resulted in a significant transformation of Mongolia's energy sector. The shift from a centrally planned model to a strategic business planning approach led to the reformation of the State-Owned Electricity Generators. The Coal Agency was repurposed as a consulting engineering firm, now focusing on providing mining engineering services to Mongolia's growing coal and minerals exploration sector.

Operational improvements, particularly in business planning and cash flow management, generated substantial cost savings. Preventing unnecessary shipments of non-coal materials, such as clay and rock, resulted in an annual savings of USD 700,000. These changes also led to operational efficiencies in electricity generation, including reducing damage to plant equipment, improved boiler temperatures, and enhanced steam pressure management.

Project Name:	Electricity Transmission Rehabilitation Project: Central Asia				
Name of Client:	Asian Development Bank				
Country:	Uzbekistan, Tajikistan, Kyrgyzstan, Kazakhstan (Mongolia)	Location	Tashkent, Dushanbe, Bishkek, Almaty		
Participation:	✓ As lead firm				
	As associate firm				
Value of Services:		(US\$)			
Source of Financing:	ADB, 6 ADB Ave, Mandaluyong City, Box 789, 0401 Manila, Philippines				
Project Type:	Consultancy Services	The number of staff:			No. of person months:
	Length of Consultancy Assignment:		1		Months: 3
	Start date:	02-Mar-01		Completion date:	25-Mar-02
Associate Firms:	Fichtner GmbH & Co KG				
Name of senior staff:	Hon. David Butcher (Energy and Business Management Planning expert) as former Minister of Energy, NZ				

Challenges

The assignment studied the electricity sectors of four Central Asian Republics—**Uzbekistan, Tajikistan, Kyrgyzstan, and Kazakhstan**—to identify potential building blocks for **creating a Central Asian Power Market**, with the possibility of later including Mongolia. This study required a comprehensive on-the-ground diagnostic assessment of electricity generators, providers, market institutional arrangements, and each country's regulatory and legal environments. It also involved analyzing cross-border legal and regulatory issues and conducting business reviews, including examining management structures and governance, then linking management key performance indicators (KPIs) to their strategic business plans. The primary goal was to recommend practical steps for developing an efficient, sustainable, and market-responsive electricity sector across the region.

Strategy

The team executed the strategy through several key tasks to achieve this objective:

- Field Study:** Conducted an in-depth field study of the electricity sectors in Uzbekistan, Tajikistan, Kyrgyzstan, and Kazakhstan, aimed at identifying foundational elements for developing a Central Asian Power Market, with potential future inclusion of Mongolia.
- Country Reviews:** The team thoroughly reviewed each country's electricity generators, providers, institutional market arrangements, and legal frameworks. They evaluated strategic business plans for functional areas such as marketing, operations, HR, financials, and R&D. They analyzed financing options for both operational needs and capital expenditures, along with capacity development plans and management KPIs. The team also assessed current tariff plans and any subsidies in place.
- Market Development:** Identified potential building blocks for a future Central Asian Power Market, benchmarked against international best practices, and developed recommended structural options

for these electricity markets.

4. **Workshops and Regulatory Reform:** The team delivered workshops and proposed a functional separation model for power sector regulatory reform. They tested the model against the current market frameworks and plans of the respective Central Asian republics.

Transformation

As a result of this process, the Central Asian countries of Kazakhstan, Kyrgyzstan, Tajikistan, and Uzbekistan agreed to adopt GG International's functional separation model as the foundation for any future Central Asian Power Market. They also acknowledged the importance of incorporating Mongolia into this emerging power market. This agreement marked a significant step towards regional electricity sector reform and market integration.

<i>Project Name:</i>	Feasibility of 500 MW Solar Energy / Thermal power plant				
<i>Name of Client:</i>	Ministry of Economy and Finance				
<i>Country:</i>	Cambodia	<i>Project location</i>	Phnom Penh / Siem Reap		
<i>Participation:</i>	✓	<i>As lead firm</i>			
		<i>As associate firm</i>			
<i>Value of Services:</i>		(US\$)			
<i>Source of Financing:</i>	Ministry of Economy & Finance, Cambodia				
<i>Project Type:</i>	Consultancy Services	<i>The number of staff:</i>	2	<i>No. of person months:</i>	6
	<i>Length of Consultancy Assignment:</i>		6 (intermittent)	<i>months</i>	
	<i>Start date:</i>	01-Nov-15	<i>Completion date:</i>	01-May-16	
<i>Name of Associate Firms (if any)</i>	None				
<i>Name of senior staff:</i>	John Third (Renewable Energy expert) and Shaan Stevens (Regulatory and Legal expert)				
Challenge					
The objective of the assignment was to undertake a feasibility study for the Government of Cambodia of a large-scale mixed Solar and Thermal power plant(s) up to a total capacity of 500 MW, including the development of a viable PPP model based on a negotiated government-backed power purchase agreement. The project built on the earlier World Bank-funded "Cambodian Trade & Competitive Project: IDA Grant H165 KH" undertaken by our firm for the Council for the Development of Cambodia, which focused on encouraging Private Participation in Infrastructure in Cambodia and developed for the Government a draft Concession Contract for use in Cambodia and a Guide Book to assist officials' implementation and management of Government risk associated with PPP projects. The assignment included (i) PPP Model Analysis: reviewing various PPP models effective for large-scale energy generation projects internationally; (ii) Regulatory Framework Review: a review of a) all relevant ministries and agencies direct working regulations (anukret) and policies (prakas) to determine roles, responsibilities, and authorities; (iii) Financial and Risk Manage Review: an analysis of Cambodian International Accounting Standards (CIFRS), the draft Law on Concessions and historic Power Purchase Agreements entered into by Electricité du Cambodge on behalf of the Cambodia Government. Task 1: PPP model analysis and selection: a) desktop review of various PPP models effective for large-scale energy generation projects, including the 550 MW Topaz Solar Farm in California and the 500 MW Huanghe Hydropower Golmud Solar Park in China; and b) PPP model development, including PPI life cycle, "Value for Money" methodology, evaluation, use of financial models, payment, Initial Technical Notices, negotiation, application of standardized contracts, contract monitoring, termination, refinancing, surveys and hand back after the contract. Task 2: Develop a draft Power Purchase Agreement: to purchase 500 MW capacity, including risk analysis of various options, including ongoing Government guarantees, take or pay provisions, tax incentives and proposed economic zone licensing. Task 3: Reporting and analysis and recommended options.					
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Project Name:	Energy and Telecommunication Infrastructure Convergence				
Name of Client:	Clear Communications (NZ) / British Telecom				
Country:	New Zealand, United Kingdom	Project location within the country:	Auckland		
Participation:	☒ As lead firm ☐ As associate firm				
Value of Services:	(US\$)				
Source of Financing:	Clear Communications (NZ) Ltd, Clear Building, Smailes Farm, Takapuna, Auckland				
Project Type:	Consultancy Services	The number of staff:	3	No. of person months:	5
	Length of Consultancy Assignment:		18 (intermittent)	months	
	Start date:	01-Feb-98	Completion date:	01-Aug-99	
Name of Associate Firms (if any)	None				
Name of senior staff: Functions Performed:	John Third (Energy and Telecommunication Expert), Shaan Stevens (Energy and Telecommunication Regulatory Expert), and Shane M Warbrick (Financial and Capital Markets Advisor)				
Detailed Narrative Description of the Project: The objective of the assignment was to study the business model of combining low-risk high-capital investment, electricity, and telecommunication infrastructure transmission networks in a market under deregulation. The aim was to review whether the potential benefits from energy and telecom transmission convergence would be sufficient for a new market entrant to overcome (cost of capital) barriers to entry into the energy and telecommunication market dominated by an incumbent with existing sunk-costs in infrastructure. The assignment included preparation, for a new entity combination of an existing Electricity Transmission operator and new entrant Telecommunication operator, of a (i) strategic business plan with separate plans for each of the functions of the business (functional business plans: Marketing, Operations, HR, Financial and R&D); (ii) external financing (banking) plan incorporating projected savings from convergence; (iii) capacity development plan for the management of the combined transmission networks, including identification, development and implementation of key performance indicators for combined transmission networks management linked to individual functional elements/plans of the overall strategic plan; (iv) Tariff Plan with a focus on the development of revised efficient and effective tariff setting for the convergent services allocated between the two business streams; and (v) Regulatory Risk Management and Reporting Plan, to plan for the issues around dealing with government regulators across the two sectors.					
Detailed Description of the Actual Services Provided by your Firm: <u>Task 1:</u> Policy and Regulatory review of the telecommunication and electricity transmission sectors to identify any potential regulatory risks or legal changes required to achieve the convergence model. <u>Task 2:</u> Working with the client's in-house engineers to identify technical or practical issues, including solutions. <u>Task 3:</u> Develop a new entity combination of an existing Electricity Transmission operator and a new entrant Telecommunication operator of the draft (i) strategic business plans including separate functional business plans (marketing, operations, HR, financial, and R&D); (ii) external financing (banking) plan; (iii) capacity development plan and KPIs; and (iv) Revised Tariff Plan. <u>Task 4:</u> Reporting to the board and management. The analysis and draft business plan proved the workability of the proposed convergence model. It recommended that achieving the highest economic and financial benefits would arise by operating a "true open access network system" to capture all new entrant traffic from the powerful incumbent operator.					

Project Name:	Privatization State-Owned Hydro Electricity Generation Station				
Name of Client:	Bay of Plenty Electric Power Board and Ngati Ruapani				
Country:	New Zealand	Project location within the country:	Waikaremoana, Bay of Plenty		
Participation:	☒ As lead firm ☐ As associate firm				
Value of Services:	(US\$)				
Source of Financing:	Regional Community Power Company, Eastern Bay Energy Trust (formerly) Bay of Plenty Electricity Power Board, 5 Richardson St, Whakatane, NZ				
Project Type:	Consultancy Services	The number of staff:	3	No. of person months:	3
	Length of Consultancy Assignment:		3	months	
	Start date:	March-1998	Completion date:	June-1998	
Name of Associate Firms (if any)	None				
Name of senior staff: Functions Performed:	John Third (Energy and Electricity Expert), Shaan Stevens (Energy Regulatory Expert), and Chris Simcock (Indigenous Peoples Expert)				
<i>Detailed Narrative Description of the Project:</i> The objective of the assignment was to lead the bid management by a joint venture between a community-owned electricity retailer and indigenous landowners to acquire state-owned hydroelectricity generation stations situated on indigenous land near Lake Waikaremoana. The aim was to capture the economic benefits by combining the hydro dam's underlying land and water resource owners with the monopoly regional electricity retailer to maximize the bid value. The assignment included preparation for the joint venture a (i) equity ownership plan, including a) valuation of economic gain from incorporating land and water rights in the operating business model; b) shareholder agreement; (ii) strategic business plan with separate plans for each of the functions of the business (functional business plans: Marketing, Operations, HR, Financial and R&D); (iii) external financing (banking) plan; (iv) capacity development plan for the management of the hydroelectricity generation station, reservation of jobs for land owners, including identification, development and implementation of key performance indicators linked to individual functional elements/plans of the overall strategic plan; (v) Tariff Plan with a focus on the development of revised efficient and effective tariff setting for the new business model; and (vi) Regulatory Risk Management and Reporting Plan arising from the vertical integration of (monopoly) generation and (competitive) retail and to plan for the issues around dealing with government energy sector and anti-competition regulators. In addition, the pre-identification of indigenous landowners underlying the dams/station and the development of a communication strategy with indigenous landowners and central/local Government unlocked value.					
<i>Detailed Description of the Actual Services Provided by your Firm:</i> <u>Task 1:</u> Undertake identification of indigenous landowners underlying the dams/station, obtain all bid documents from the Government vendor agent and determine electricity market and operator issues from the electricity retail joint venture partner. <u>Task 2:</u> Develop a joint venture agreement and initial draft of (i) an equity ownership model for a vertically integrated joint venture; (ii) strategic business plans for the joint venture, including separate functional business plans (marketing, operations, HR, financial and R&D); (ii) external financing (banking) plan; (iii) capacity development plan and KPIs; and (iv) Tariff Plan. <u>Task 3:</u> Undertake analysis of all bid documents, undertake financial due diligence of assets/business being sold prepare formal bid with electricity retailer in-house experts. <u>Task 4:</u> Submit the offer. <u>Task 5:</u> Deliver and manage ongoing internal and external communication strategy.					

Project Name:	Privatization cornerstone State-Owned Thermal Electricity Generation Company				
Name of Client:	The AES Corporation (USA) / Temasek Holdings (Singapore)				
Country:	New Zealand	Project location within the country:	Wellington and regions		
Participation:	☒ As lead firm ☐ As associate firm				
Value of Services:	(US\$)				
Source of Financing:	The AES Corporation (USA), 4300 Wilson Boulevard, 11th Floor, Arlington, VA 22203				
Project Type:	Consultancy Services	The number of staff:	3	No. of person months:	3
	Length of Consultancy Assignment:		3	months	
	Start date:	01-Sep-98	Completion date:	01-Apr-99	
Name of Associate Firms (if any)	None				
Name of senior staff: Functions Performed:	John Third (Energy and Electricity Expert), Shaan Stevens (Energy Regulatory Expert), and Paul Goodeve (Business and Policy Analyst)				
<i>Detailed Narrative Description of the Project:</i> The objective of the assignment was to lead the bid management for the AES Corporation. This global power company owns and operates a diverse portfolio of electricity generation and distribution businesses in over 18 countries worldwide. The bid was for Contact Energy, a state-owned enterprise and cornerstone electricity generation and retail company in New Zealand and the country's largest thermal generation electricity provider. The assignment included preparation for the bid a (i) strategic energy sector plan, including a) identification of the mechanisms of the electricity market; b) identification of the projected long term energy demand; c) analysis of various energy sector participants across the whole value chain, analyzing by competitiveness, regulatory barriers and ownership (private sector, local-regional-national government, investment entities); and d) future pricing through the analysis of close substitutes; (ii) strategic business plan analysis of Contact Energy with analysis of the functional business plans: marketing, operations, HR, financial and R&D; (iii) financing models and capital repatriation; (iv) capacity development plans for the management of portfolio of assets and (v) Regulatory Risk Management and Reporting Plan arising from the regulation of the generation market by the New Zealand Commerce Commission and to plan for the issues around dealing with government energy sector and anti-competition regulators. In addition, identifying indigenous landowners and claimants underlying the various power stations was required, as was developing a communication strategy with indigenous landowners and central/local Government.					
<i>Detailed Description of the Actual Services Provided by your Firm:</i> Our team of energy and legal/commercial advisors were fielded, together with our specialist indigenous peoples' advisors, to assist The AES Corporation's Asia Pacific regional team in preparing and submitting its bid, including (i) undertaking the entire bid management process working alongside AES's regional experts, (ii) Developing a detailed asset valuation for the target company, and (iii) Assisting in the due diligence process. As part of The AES Corporation's bid participation, our firm also provided stakeholder management experts and developed and implemented a stakeholder engagement plan for The AES Corporation with (i) Government ministers and officials and (ii) Local indigenous groups and landowners with ownership rights in the land underlying the power stations. Strategic Energy policy advice that our firm provided included: (i) Analysis of external and internal markets and dominance of state-owned generators, (ii) Position of energy retailers in the separated vertical energy market, (iii) Impact of privatization of state-owned hydro-generation, and (iv) Impact of Energy Market and marginal generator price setting.					

Project Name:	Strategy for Reconstruction of Iraq Electricity Sector				
Name of Client:	Government of Iraq				
Country:	Iraq	Project location within the country:	Basra and Baghdad		
Participation:	☒ As lead firm ☐ As associate firm				
Value of Services:	(US\$)				
Source of Financing:	DFID, 22 Whitehall, London				
Project Type:	Consultancy Services	The number of staff:	1	No. of person months:	
	Length of Consultancy Assignment:	2	months		
	Start date:	01-May-04	Completion date:	01-Jun-04	
Name of Associate Firms (if any)	None				
Name of senior staff: Functions Performed:	Hon. David Butcher (Energy and Business Management Planning expert)				
<i>Detailed Narrative Description of the Project:</i> The objective of the assignment was to undertake a study of the electricity sector in southern Iraq to identify the underlying drivers of the ever-widening gap between supply and demand, including the impact of international military responses and the sanctions imposed by the United Nations on the country's previously well-established legal, regulatory, political, and economic institutions—including state-owned electricity enterprises. The review includes an analysis of the impact of (i) security (violence and instability); (ii) management challenges, including decades of bad management; (iii) lack of coherent and consistent sector policies; (iv) absence of sectoral planning and future planning and analysis; and (v) political issues around subsidies on electricity tariffs.					
<i>Detailed Description of the Actual Services Provided by your Firm:</i> The Power Sector, Planning, and Strategy Expert undertook an analysis of the impact of (i) security and instability); (ii) management challenges; (iii) lack of coherent and consistent sector policies; (iv) absence of sectoral planning and future planning and analysis; and (v) political issues around subsidies on electricity tariffs. The report to the Government of Iraq highlighted Iraq's severe electricity crisis, which included an ever-widening gap between supply and demand and the continuing impact of shifting demographics. For example, during the most recent review period, there was no addition of new generation capacity; at the same time, the population in Iraq had increased by 10 million.					

<i>Project Name:</i>	Review of electricity market establishment in China				
<i>Name of Client:</i>	China Electricity Council (executing Agency) and Guangdong Electric Power Holding Company (implementing Agency).				
<i>Country:</i>	PR China	<i>Project location within the country:</i>	Guangzhou		
<i>Participation:</i>	☒ As lead firm ☐ As associate firm				
<i>Value of Services:</i>	(US\$)				
<i>Source of Financing:</i>	Ministry of Foreign Affairs and Trade, Stafford House, 40 The Terrace, Wellington, NZ				
<i>Project Type:</i>	Consultancy Services	<i>The number of staff:</i>	3	<i>No. of person months:</i>	4
	<i>Length of Consultancy Assignment:</i>		<i>Five intermittent</i>		<i>months</i>
	<i>Start date:</i>	December-1998	<i>Completion date:</i>	January-2001	
<i>Name of Associate Firms (if any)</i>	None				
<i>Name of senior staff:</i> <i>Functions Performed:</i>	Hon. David Butcher, Dr. Alan Jenkins, Dr. Mike Moy				
<i>Detailed Narrative Description of the Project:</i> Guangdong operated a "regulated electricity market" where the Guangdong Electric Power Holding Company owned and operated all electricity from generation to the meter and had complete control. The utility company owned the infrastructure and transmission lines and then sold the electricity directly to the customers, abiding by electricity rates set by the China Electricity Council. This monopoly approach had known limitations, especially consumer choice and operating efficiency. The regulated rates were based on the views and judgments of utilities and regulators about the reliability and environmental impacts of the product and not the discipline of market forces, resulting in utilities and regulators imposing their choices on customers. However, a regulated market did have some benefits, including stable prices and long-term certainty. Our project challenge was to help the client understand the benefits of changing to a "competitive market" approach and how that approach could produce more economic efficiencies and provide the lowest costs to customers on a long-term, sustainable basis.					
<i>Detailed Description of the Actual Services Provided by your Firm:</i> Our energy economists and policy experts undertook a technical assistance program supported by NZ AID, with over five field missions helping the client to explore and understand the differences between regulated and open market systems. We were able to demonstrate that: • Energy market-based price signals are transparent and can stimulate appropriate infrastructure investment, energy conservation, and demand response, • Competitive energy markets offer consumers real opportunities for savings and provide peace of mind if choosing a fixed-rate contract, • Consumers can seek green or clean energy sources, ensuring that retail energy companies that want to remain competitive increase their green offerings, placing the consumer in the driver's seat.					

<i>Project Name:</i>	Corporate Social Responsibility in Private Sector Energy Investment				
<i>Name of Client:</i>	Electra, TransAlta, Manawatu Electric Power Board, Ngati Raukawa, Ngati Muaopoko, Te Atiawa				
<i>Country:</i>	New Zealand	<i>Project location within the country:</i>	Mangahao, Manuatu, NZ		
<i>Participation:</i>	☒ As lead firm ☐ As associate firm				
<i>Value of Services:</i>	(US\$)				
<i>Source of Financing:</i>	TransAlta, Canada, 110 – 12th Avenue SW PO Box 1900, Calgary, AB T2P 2M1				
<i>Project Type:</i>	Consultancy Services	<i>The number of staff:</i>	3	<i>No. of person months:</i>	3
	<i>Length of Consultancy Assignment:</i>		Three intermittent	<i>months</i>	
	<i>Start date:</i>	March 1997	<i>Completion date:</i>	January 1998	
<i>Name of Associate Firms (if any)</i>	None				
<i>Name of senior staff:</i> <i>Functions Performed:</i>	Shaan Stevens – (Project Director, Legal and Commercial) and John Third – Energy specialist				
<i>Detailed Narrative Description of the Project:</i> To introduce private sector investment into the energy sector, the NZ Government offered a 38-MW hydro-electric dam for sale. TransAlta, Canada's largest clean electricity provider, sought to bid for the hydro scheme and wanted to create a competitive advantage by adopting Corporate Social Governance principles and involving the local communities in its bid. The project involved Bid Management for the acquisition of hydroelectricity generation stations (Mangahao), including (i) Identification of Maori (indigenous people) and local landowners in the region of the dams/station with an aim to their active Maori participation, (ii) development of a communication strategy with both Maori and central/local Government, and (iii) identification of impediments to a successful purchase. A growing number of businesses understand the competitive value of adopting alliances with indigenous people as a part of their CSG strategy. An innovative approach brought into the consortium of bidders the original indigenous landowners of the hydro-station, comprising TransAlta, a local community-owned energy retailer, and the indigenous landowners.					
<i>Detailed Description of the Actual Services Provided by your Firm:</i> An innovative CSG and ESG approach brought into the consortium of bidders the original indigenous landowners of the hydro-station, comprising TransAlta, a local community-owned energy retailer, and the indigenous landowners. Our firm (i) worked with indigenous groups and private sector companies to develop and manage a workable commercial consortium, (ii) bid managed and undertook due diligence, (iii) managed consortium relationships, meetings, and agreements, and (iv) managed communication strategy with individual Maori tribal members. We demonstrated that forging close alliances between global corporations, community-owned enterprises, and indigenous peoples showed demonstrable benefits to all involved. We referred to research undertaken at the Saskatchewan Indian Federated College in 1997 showed the benefits of companies linking in with indigenous and local community-owned enterprises, providing a community, social, cultural, and environmental context to their investment.					

Project Name:	Diagnostic review of Electricity Regulation: CAREC Member Countries				
Name of Client:	Asian Development Bank				
Country:	Uzbekistan, Kazakhstan, Kyrgyzstan, Azerbaijan, Tajikistan, China, Mongolia	Project location within the country:	Tashkent, Almaty, Astana, Bishkek, Baku, Dushanbe, Ulaanbaatar, Beijing		
Participation:	☒ As lead firm ☐ As associate firm				
Value of Services:	(US\$)				
Source of Financing:	ADB, 6 ADB Ave, Mandaluyong City, Box 789, 0401 Manila, Philippines				
Project Type:	Consultancy Services	The number of staff:	1	No. of person months:	2
	Length of Consultancy Assignment:		Two intermittent		months
	Start date:	January-2005	Completion date:	July-2005	
Name of Associate Firms (if any)	None				
Name of senior staff: Functions Performed:	Hon. David Butcher (International Energy, policy, and regulatory expert)				
<i>Detailed Narrative Description of the Project:</i> Traditionally, electric utilities have been treated differently from other businesses because they are "natural monopolies" with monopoly characteristics within their generation, transmission, and distribution components. The electricity utilities operate as monopolies within each element of the overall business and are "vertically integrated," where a single firm is responsible for several aspects, from generation to customer billing. This structure has required careful and thoughtful regulatory models applied across those elements that are genuinely monopolistic without impacting healthy competition. The objective of this assignment was to undertake a diagnostic review of the existing electricity regulatory environment within the seven member countries of the CAREC (Central Asia Regional Economic Cooperation) and to develop a common conceptual framework for regulating the electricity sector. This process involved an assessment in each member country of (i) electricity generators and providers; (ii) electricity market institutional arrangements; and (iii) regulatory and legal environment in each country and any cross-border legal and regulatory issues.					
<i>Detailed Description of the Actual Services Provided by your Firm:</i> Reports for each of the seven countries were developed on the impact of electricity regulation in the CAREC countries and presented at an initial seminar held in Beijing. Our International Energy, policy, and regulatory expert developed a draft common conceptual framework through desktop review, an extensive study tour of the region (accompanied by an ADB staff member), and international best practice benchmarking. This approach led to our expert chairing several conference sessions and leading the discussion on the study results. The ADB ultimately published the study titled "Electricity Sectors in CAREC Countries – a Diagnostic Review of Regulatory Approaches and Challenges."					

<i>Project Name:</i>	Capacity Building for Network Industry Analysis				
<i>Name of Client:</i>	Ministry of Planning and Investment (executing) and Central Institute of Economic Management (implementing)				
<i>Country:</i>	Vietnam	<i>Project location within the country:</i>	Hanoi		
<i>Participation:</i>	☒ As lead firm ☐ As associate firm				
<i>Value of Services:</i>	(US\$)				
<i>Source of Financing:</i>	Ministry of Foreign Affairs and Trade, Stafford House, 40 The Terrace, Wellington, NZ				
<i>Project Type:</i>	Consultancy Services	<i>The number of staff:</i>	1	<i>No. of person months:</i>	1
	<i>Length of Consultancy Assignment:</i>		One intermittent	months	
	<i>Start date:</i>	March-2000	<i>Completion date:</i>	December-2000	
<i>Name of Associate Firms (if any)</i>	Institute for the Study of Competition and Regulation of Victoria University Wellington.				
<i>Name of senior staff:</i> <i>Functions Performed:</i>	David Butcher (international electricity and telecommunication expert)				
<i>Detailed Narrative Description of the Project:</i> The Vietnamese Government faced challenges in the electricity and telecommunication sectors' ability to respond to the rapid economic growth in the country. This rapid growth was of concern given the significant correlation between the ICT and energy sectors and GDP growth and the more substantial growth effects seen in developing countries from these two sectors' development. To address this concern, the Government sought help international support to create analytical and policy development capacity within the Central Institute of Economic Management to upgrade the expertise of the Institute in these critical areas. Internal capacity is an area where the Vietnamese economy is striking significant problems. The Government selected the Electricity and Telecommunications industries for the study, including (i) a literature review, (ii) a sample survey, (iii) a study tour, and (iv) workshops.					
<i>Detailed Description of the Actual Services Provided by your Firm:</i> Our international electricity and telecommunication expert undertook a diagnostic assessment of the electricity and telecommunication sectors in Vietnam to identify (i) the optimal future outcome, (ii) the progress and success made to date, (iii) the continuing gaps and challenges, and (iv) the policy and regulatory mechanisms to achieve progress. This process included a desktop assessment to benchmark Vietnam against other developing countries and international best practices, running a demand-side analysis, including a survey of customers, a supply-side analysis, and a review of technical reports previously prepared in these areas in Vietnam. A study tour was organized for the Institute to NZ to expose them to other countries' experiences and solutions with the assistance of the CIEM. The focus areas included understanding the benefits of a commercial focus in delivering ICT and energy services, the positive outcomes from the competition, and the need for regulation in areas where competition fails or is absent. All reports were translated into Vietnamese and have significantly contributed to policy development in Vietnam.					

<i>Project Name:</i>	Institutional Reform of the Yunnan Electric Power Company				
<i>Name of Client:</i>	Yunnan Electric Power Company and Asia Development Bank				
<i>Country:</i>	PR China	<i>Project location within the country:</i>	Kunming, Yunnan-Fu		
<i>Participation:</i>	As lead firm ✓ As associate firm				
<i>Value of Services:</i>	(US\$)				
<i>Source of Financing:</i>	ADB, 6 ADB Ave, Mandaluyong City, Box 789, 0401 Manila, Philippines				
<i>Project Type:</i>	Consultancy Services	<i>The number of staff:</i>	1	<i>No. of person months:</i>	4
	<i>Length of Consultancy Assignment:</i>		4	<i>months</i>	
	<i>Start date:</i>	December-1999	<i>Completion date:</i>	April-2000	
<i>Name of Associate Firms (if any)</i>	PA Consultants				
<i>Name of senior staff:</i> <i>Functions Performed:</i>	Hon. David Butcher (International Energy Governance Expert)				
<i>Detailed Narrative Description of the Project:</i> As an associate, our firm was responsible for institutional analysis and market development work. The project aimed at providing technical assistance in accounting, law, organization, IT, and management to a regional power company in China's Yunnan province Expert)					
<i>Detailed Description of the Actual Services Provided by your Firm:</i> Our energy expert reviewed the law and structure of the Yunnan Electric Power Company. Following the review, the expert (i) designed a new organizational structure to better focus on customers and the organization's business activities, (ii) assessed the electricity market and associated institutions, (iii) identified the criteria that needed to be satisfied if a market were to evolve, and (iv) proposed measures to set up an electricity market.					

<i>Project Name:</i>	Facilitating Private Investment in the Electricity Sector		
<i>Name of Client:</i>	Nigeria Electric Power Authority		
<i>Country:</i>	Nigeria	<i>Project location within the country:</i>	Lagos
<i>Participation:</i>	☒ <i>As lead firm</i> ☐ <i>As associate firm</i>		
<i>Value of Services:</i>	(US\$)		
<i>Source of Financing:</i>	The World Bank, 1818 H Street NW, Washington DC 20433, United States of America		
<i>Project Type:</i>	Consultancy Services	<i>The number of staff:</i>	<i>No. of person months:</i>
	<i>Length of Consultancy Assignment:</i>		<i>months</i>
	<i>Start date:</i>	September-1992	<i>Completion date:</i> October-1992
<i>Name of Associate Firms (if any)</i>	None		
<i>Name of senior staff:</i> <i>Functions Performed:</i>	Hon David Butcher (International Energy Policy, Regulatory and Governance Expert)		
<i>Detailed Narrative Description of the Project:</i> The Nigeria Electric Power Authority in Lagos sought advice under a World Bank-funded technical advisory project on whether introducing private capital into the Nigerian electricity sector could improve supply, operations, maintenance and sector investment standards. Lack of investment capital is a significant problem for Nigeria's national economic growth strategy.			
<i>Detailed Description of the Actual Services Provided by your Firm:</i> Our energy economist and policy expert demonstrated how investment in infrastructure and other capital assets supports growth in the national economy. Further, by bringing private capital into the electricity sector, he showed that numerous benefits would occur, not only for the energy sector but for the overall Nigerian economy. Our expert reviewed the (i) regulatory and legal structure and (ii) governance, management, and operating structure - of the Nigeria Electric Power Authority to examine whether the introduction of private capital could improve standards of supply, operations, maintenance, and investment, including financial performance. The analysis identified how cost-effective development could be encouraged through changes to laws, regulations, and practices to allow private capital to participate fully in the sector. These benefits are captured from (i) the bundling of maintenance contracts into large parcels and offering them for a public tender to (ii) adopting a corporatization and, or a privatization model. Our report showed that additional capital would (i) increase output, (ii) increase labor productivity in the sector, (iii) bring much-needed funds for delayed critical maintenance, and (iv) enable the sector to take advantage of new technology or advancements in equipment or machinery to increase efficiency and reduce costs. The client accepted cost-effective development through capital and adopted our proposals to amend laws, regulations, and practices to allow private capital to participate fully in the sector.			

<i>Project Name:</i>	Energy Sector Diagnostic Assessment				
<i>Name of Client:</i>	The UNDP and the World Bank (as executing Agency)				
<i>Country:</i>	Vietnam	<i>Project location within the country:</i>	Hanoi and Ho Chi Minh City		
<i>Participation:</i>	☒ As lead firm ☐ As associate firm				
<i>Value of Services:</i>	(US\$)				
<i>Source of Financing:</i>	UNDP, United Nations Building, New York City, NY, United States of America				
<i>Project Type:</i>	Consultancy Services	<i>The number of staff:</i>	1	<i>No. of person months:</i>	0.75
	<i>Length of Consultancy Assignment:</i>		0.75	<i>months</i>	
	<i>Start date:</i>	March-1992	<i>Completion date:</i>	April-1992	
<i>Name of Associate Firms (if any)</i>	None				
<i>Name of senior staff: Functions Performed:</i>	Hon David Butcher (International Energy Policy, Regulatory and Governance Expert)				
<i>Detailed Narrative Description of the Project:</i> The rapid economic development in Vietnam strained the electricity load, increasing on average by over 10 percent yearly. The growing power demand triggered a diagnostic review by Vietnam of its overall energy sector, including the immediate problems in generation and transmission losses.					
<i>Detailed Description of the Actual Services Provided by your Firm:</i> Our leading energy policy expert, a former Minister of Energy from NZ, undertook a whole-of-energy sector assessment for Vietnam: identifying the unique mechanisms of the Vietnamese electricity market, the projected long-term energy demand, an analysis of various energy sector participants across the whole value chain, analysis and identification of any regulatory barriers (local-regional-national Government, investment entities), and future pricing through the study of close substitutes. The old paradigms that govern the electricity sector are evolving with traditional models of large, centralized generators to produce electricity and maintain reliability changing. The energy sector review identified several institutional weaknesses contributing to inefficient energy production, transmission, and consumption. Immediate changes occurred with the governance, management, and operations of the regional power distribution companies in Hanoi and Ho Chi Minh City that placed Vietnam on a pathway to improved energy efficiency					

<i>Project Name:</i>	Regulation and Management of Utility Industries				
<i>Name of Client:</i>	Government of Mongolia				
<i>Country:</i>	Mongolia	<i>Project location within the country:</i>			
<i>Participation:</i>	☒ As lead firm ☐ As associate firm				
<i>Value of Services:</i>	(US\$)				
<i>Source of Financing:</i>	Harvard Institute for International Development, Cambridge, MA, USA				
<i>Project Type:</i>	Consultancy Services	<i>The number of staff:</i>	1	<i>No. of person months:</i>	1
	<i>Length of Consultancy Assignment:</i>		One intermittent	months	
	<i>Start date:</i>	December-1993	<i>Completion date:</i>	January-1994	
<i>Name of Associate Firms (if any)</i>	None				
<i>Name of senior staff:</i> <i>Functions Performed:</i>	Hon David Butcher (International Energy Policy, Regulatory and Governance Expert)				
<i>Detailed Narrative Description of the Project:</i> The project initially advised the Mongolian Government on the benefits of the corporatization of telecommunications and other utilities. The Mongolian Government Privatization Commission and its advisor, the Harvard Institute, sought help from the New Zealand Embassy to identify an expert given NZ's early expertise in privatization. Our international expert provided this assistance, given his experience as the former Minister of Energy in NZ. Our Energy Expert made an initial presentation to the representatives of numerous state enterprises. This process led to detailed discussions with seven major utility sector operators, followed by an intensive debate about the differences between the Mongolian and New Zealand approaches.					
<i>Detailed Description of the Actual Services Provided by your Firm:</i> Seven utility sectors met and exchanged ideas with our consultant. Our expert then considered their input and matched it against his existing knowledge and expertise, then developed a written report suggesting that they answer the Finance Ministry on business matters and the Communications Ministry on regulatory issues. Following this intensive process, our expert and the Project Task Manager, Mary Sophia Smith, prepared a report for the Government of Mongolia. The suggestions in the final report were, for the most part, accepted by the Government and carried out. The Government of Mongolia took the recommendations on allocating responsibilities but resolved to retain ownership of the telephone equipment. This decision resulted in only a partially successful outcome with a semi-privatization. However, it has allowed Mongolia to leap to the forefront of regulatory practice by enforcing a structuring separation of services and facilities.					