



Consultoría en proyectos Energéticos

Diseño de líneas y subestaciones de AT, MT y BT

Interventoría en Proyectos de Ingeniería

Mejoramiento de la Calidad de la Energía

Fuentes no Convencionales de Energía

Montajes Electromecánicos

Construcción y Mantenimiento de Infraestructura Eléctrica

Consultancy on Energy Projects
Design of HV and MV lines and substations
Supervision of Engineering Projects
Power Quality

Renewables

Electromechanical assemblies

Construction and Maintenance of Electric Infrastructur

Sistema de Gestión Integral ISO 9001 2008, ISO 14001 -2004 y OHSAS 18001 – 2007

Integrated HSEQ System ISO 9001 2008, ISO 14001 -2004 and OHSAS 18001 - 2007

Servicios de Consultoría Energética, Interventoría, Diseño, Construcción y Mantenimiento en proyectos de redes y líneas de alta, media y baja tensión; y Operaciones Comerciales: suspensión, corte, reconexión y solución a peticiones, quejas y recursos en Sistemas de Distribución y Comercialización.

Consulting services on Energy Matters, supervision, design, construction and maintenance of electric power in MV and HV grids, and commercial operations in electrical distribution systems.











In 2017, **BRP INGENIEROS SAS** celebrates 15 years as an engineering company in the energy sector with the best compliance, responsibility and quality services in Colombia and several countries in the region.

We have high standards managing the projects because we are based on our Integrated Management System that certifies the compliance to the requirements of the ISO9001, ISO 14001, OHSAS 18001 and NORSOK S006 standards which last audited was march 2017.

Our conception of Corporate Social Responsibility involves our employees, clients and communities where we execute the services, through a responsible executing of the works with control of the impact on the people and the environment, complying with the technical standards and legal rules and assuming the best business practices.

BRP INGENIEROS SAS is an electric engineering and consulting firm located in Colombia with international experience in advising governments and private companies in energy aspects as energy planning, improving power quality, commercial processes in utilities companies, electric coverage expansion and design for construction of lines, substations, smart grids and infrastructure for renewable energies.

Our firm counts on with a professional and experienced engineers team, highly trained support personnel, software and equipment to assist in the design and consultancy in Energy Projects with significant savings taking advantage of South American professional lower labor costs compared to those in the USA.

Consulting services include: feasibility of energy projects, electric planning, energy policy, renewables (specially PV, Wind and small hydro), bio-fuels, advisory of electrical utilities management, socio – economic studies for engineering projects, reduction of electricity losses in distribution systems and asset valuation.

Design services include: HV and MV lines and substations, Small Hydro Power Plants, transmission lines 230kV, 115kV, distribution networks 34.5kV and 13.2 kV, PV and wind for various public and private projects

Through these years, we are proud to say that we have the energy to improve the life of our clients and team through the responsible performing of our commitments and the law, and the life of final users of the energy services we provide through the quality and compliance of the work and services we perform. Sincerely

Ing. Pablo José Barrera R. CEO and Manager

www.brpingenieros.com



CERTIFICATE OF BOGOTÁ CHAMBER OF COMMERCE







CAMARA DE COMERCIO DE BOGOTA

SEDE CHAPINERO

10 DE JULIO DE 2013 HORA 16:40:20

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PAGINA: 1 de 2

CERTIFICADO DE EXISTENCIA Y REPRESENTACION LEGAL O INSCRIPCION DE DOCUMENTOS

LA CAMARA DE COMERCIO DE BOGOTA, CON FUNDAMENTO EN LAS MATRICULAS E INSCRIPCIONES DEL REGISTRO MERCANTIL

CERTIFICA:

NOMBRE : BRP INGENIEROS S A S

N.I.T.: 830123947-9 ADMINISTRACION: DIRECCION SECCIONAL DE IMPUESTOS DE BOGOTA, REGIMEN COMUN

DOMICILIO : BOGOTA D.C.

CERTIFICA:

MATRICULA NO: 01289546 DEL 15 DE JULIO DE 2003

CERTIFICA:

RENOVACION DE LA MATRICULA :8 DE MAYO DE 2012

ULTIMO AÑO RENOVADO: 2012

ACTIVO TOTAL REPORTADO: \$2,313,550,587

CERTIFICA:

DIRECCION DE NOTIFICACION JUDICIAL : CRA 15A N 55 10

MUNICIPIO : BOGOTA D.C.

EMAIL DE NOTIFICACION JUDICIAL : BRPINGENIEROS@ETB.NET.CO

DIRECCION COMERCIAL : CRA 15A N 55 10

MUNICIPIO : BOGOTA D.C.

EMAIL COMERCIAL : BRPINGENIEROS@ETB.NET.CO

CERTIFICA:

CONSTITUCION: QUE POR DOCUMENTO PRIVADO DEL 6 DE JUNIO DE 2003, INSCRITA EL 15 DE JULIO DE 2003 BAJO EL NUMERO 00888509 DEL LIBRO IX, SE CONSTITUYO LA SOCIEDAD COMERCIAL DENOMINADA BRP INGENIEROS E U.

CERTIFICA:

QUE POR DOCUMENTO PRIVADO DE EMPRESARIO DEL 20 DE NOVIEMBRE DE 2009, INSCRITA EL 21 DE DICIEMBRE DE 2009 BAJO EL NÚMERO 01348974 DEL LIBRO IX, LA SOCIEDAD CAMBIO SU NOMBRE DE: BRP INGENIEROS E U POR EL DE: BRP INGENIEROS S A S.

CERTIFICA:

QUE POR DOCUMENTO PRIVADO ADICIONAL DEL 6 DE JUNIO DE 2003 SE ACLARA LA CONSTITUCION.

CERTIFICA:

QUE POR DOCUMENTO PRIVADO DEL EMPRESARIO DEL 20 DE NOVIEMBRE DE 2009, INSCRITO EL 21 DE DICIEMBRE DE 2009 BAJO EL NUMERO 01348974 DEL LIBRO IX, LA EMPRESA UNIPERSONAL DE LA REFERENCIA SE CONVIRTIO DE EMPRESA UNIPERSONAL A SOCIEDAD POR ACCIONES SIMPLIFICADA S A S BAJO EL NOMBRE DE: B R P INGENIEROS S A S

CERTIFICA:

REFORMAS:

E.P. NO. FECHA NOTARIA CIUDAD FECHA NO.INSC. 0000001 2006/05/25 0003 BOGOTA D.C. 2006/06/01 01058734 0000001 2007/12/25 0003 BOGOTA D.C. 2008/03/17 01199218



HSEQ CERTIFICATION







Consultancy services, Design, supervision, Construction and maintenance of HV lines, networks and substations.

Commercial operations in electricity utilities companies

Consultancy services, Design, supervision, Construction and maintenance for civil works and buildings.





MAIN ASSOCIATES

Tecnoavanti SAS, www.tecnoavanti.com, Colombia

Inprelco SA, www.inprelco.com, Colombia

Servicios Geológicos Integrados SGI LTDA, www.sgiltda.com, Colombia

Sacyr, www.sacyr.com, España

Almonte Ingeniería y Tecnología, República Dominicana, www.almonteingeniería.com

Corporación Energía y Medio Ambiente, http://www.corpoema.com/; Colombia

Serintra SA de CV, www.serintra.com.mx, México

Padeco CO Ltd www.padeco.jp - Japón

Fundación Bariloche www.fundacionbariloche.org.ar - Argentina

SNC LAVALÍN (Itansuca) www.itansuca.com Colombia

Sigla SA www.sigla.com.ar Argentina

Eince Ltda www.einceltda.com Colombia

Energía Hidrocarburos y Minerales SAS, www.ehm.com.co, Colombia



MAIN CLIENTS

- Sacyr Industrial
- Consorcio SH Rumichaca
- Empresa de Energía de Boyacá EBSA
- Unidad de Planeación Minero Energética UPME
- USAID Tetra Tech.
- PCHS de Colombia
- Parque Industrial Cartagena Verde
- Central Hidroeléctrica de Caldas CHEC
- Agregados María de los ángeles
- Electrificadora de Santander ESSA
- ZTE Corp.
- Metrovivienda Bogotá
- Alstom Corp
- ABB Colombia
- Programa de las Naciones Unidas para el Desarrollo PNUD
- Empresa Nacional de Energía Eléctrica de Honduras ENEE
- Comisión Federal de Electricidad- CFE, México.
- Interconexión Eléctrica SA ESP ISA -
- Empresas Públicas de Medellín EEPPM SA ESP
- Pacific Rubiales Meta Petroleum Corp. MPC
- Banco Interamericano de Desarrollo BID
- Acueducto Metropolitano de Bucaramanga AMB
- Harken de Colombia Ltd.
- Electrificadora de Santander SA, ESSA ESP.
- Electricaribe SA ESP
- Indumil Industria Militar de Colombia
- Electronorte Distriluz Perú
- Empresa de Energía de Cundinamarca SA ESP
- Electrificadora del Meta SA, EMSA ESP
- Agencia Presidencial para la Acción Social y la Cooperación Internacional
- Distribuidora del Pacifico, DISPAC S.A. ESP
- Empresa De Energía del Casanare ENERCA SA ESP
- Gobernación de Casanare
- Ministerio de Educación Nacional



MAIN SERVICES WE OFFER

CONSTRUCTION AND MAINTENANCE.

HV lines and substations

Distribution Networks and Substations

Civil Works for HV and MV Lines, Networks and Substations

Small Hydro plants

Communications networks

Power networks and power support equipment for telecommunications networks.

Electromechanical Assembly for industrial plants

PV and Wind energy projects

ENGINEERING

Engineering for Small Hydro and PV projects Detailed Engineering for HV and MV lines projects Detailed engineering for HV Substations projects Design of rural electrification projects.

CONSULTANCY:

Feasibility of energy projects, especially electricity sector.

Electric energy planning

Energy policy studies

Non-conventional sources of energy (Renewables)

Design of plans and programs for rational use of energy

Socio-economic studies for engineering projects.

Environment studies for infrastructure projects

SUPERVISION

Construction of electric distribution networks. Losses reduction programs in distribution systems. Telecommunications engineering Electrical Engineering Projects in HV and MV Environmental Projects.



CONSTRUCTION AND MAINTENANCE MAIN PROJECTS

Sacyr SA	 Construction of feeders 34.5kV for highway asphalt plants in Colombia.
PCHs DE COLOMBIA	 Performing of 4 hydroelectric generation projects (SHP) in Cundinamarca. BRP is a partner and performs EPC of the projects.
Electrificadora de Santander, ESSA	 Electrical works and activities to reduce and control the electric utility's rate of energy losses, meters testing and control of loads in the area of influence of ESSA, 120000 final customers.
ZTE CORP	 Site detailed surveys, maintenance and replacement of power site systems in Claro national cellular network
Empresa de Energía del Quindío EDEQ - EEPPM	 Execution of the loss reduction program in the area of influence of EDEQ electric utility. 55,000 customer
Centrales Hidroeléctricas de Caldas CHEC - EEPPM	 Construction of MV networks, activities for connecting customers to the network and complementary activities in the CHEC electric utility coverage area 60,000 users.
Oleoducto de los Llanos Orientales ODL	 UPS maintenance nationwide
COMISIÓN FEDERAL DE ELECTRICIDAD	 Construction of HV Lines and Substations: Yautepec, Emiliano Zapata and Topilejo. 230 kV, 1C, 11 km HV Line between El Habal and Culiacán Substations, 230kV 1C, 30 km, associated with Serintra de Mexico.
Centrales Hidroeléctricas de Caldas CHEC - EEPPM	 Expansion and replacement of networks Northwest Region.
Pacific Rubiales-Meta-Petroleum	 Maintenance of electric networks, substations, boards and associated electrical equipment in 115kV, 34.5kV, 13.2kV and LV, and fiber optic maintenance in Campo Rubiales -Meta Mtto Oil Infrastructure.
Empresa Nacional de Energía Eléctrica de Honduras - ENEE	 Construction and commercial operation of a 86km, 138kV Transmission Line to interconnect the San Pedro Sula Sur and Naco substations
Pacific Rubiales-Meta-Petróleum	 Maintenance of OPGW fiber optic network and associated passive equipment in Campo Rubiales, Meta.
Pacific Rubiales-Meta-Petróleum	 Maintenance of electric networks, substations, boards and associated equipment in 115kV, 34.5kV, 13.2kV and BT in Campo Rubiales, Meta. General maintenance and environmental works on the networks for their sustainability.
Empresas Públicas de Medellín –	 Installation of 40,000 prepaid electricity meters for the





EEPPM SA ESP	metropolitan area of Medellín and the north of Antioquia.
Delima – Marsh, MMC	 Structured Cabling for offices in Bucaramanga and Bogotá, and maintenance of diesel generators in Barranquilla
Harken de Colombia	 Design and Construction of the 34,5kV lines and substations for the interconnection of the oil production wells Tilodirán 2 and 3 and Boral in the Department of Casanare.
Electricaribe SA ESP	 Operation of a electric network maintenance service center, and meters control and other services in the sector Córdoba 02 (Montería and nearby municipalities). Full operating maneouvres on the electric system for 160,000 customers from the network planning, the maintenance, commercial operations, control and monitoring activities and loss reduction activities
Indumil	 Substations Maintenance at the Santa Bárbara military Factory at Sogamoso. 34.5kV, 13.2kV
Empresa de Energía de Boyacá, EBSA SA ESP	 Maintenance of the 115kV transmission line: Paipa- Sideboyacá, Tunja.
	 Supply, assembly and installation of 13.2 kV distribution networks, between Curundo and Puerto Meluk in the Department of Chocó. 12 km
Distribuidora del Pacifico, DISPAC SA ESP	Supply, assembly and installation of distribution networks at 13.2 kV, Between Cértegui and Bagadó in the Department of Chocó. 28 km.
	 Supply, assembly and installation of distribution networks at 13.2 kV, Between Tanando and San José de Purré in the Department of Chocó. 16 km
Gobernación de Casanare	 Supply of Battery Bank, Checking, Programming and Start-up of the Protection Relays, Substation 115 / 34.5 / 13.2 kV. at Aguaclara Casanare.
ARS Coesperanza	 Installation and start-up of the LAN network, and LV electrical networks, Substation, lighting, power control, sound, alarms and communications. Sogamoso
EBSA ESP Sogamoso	 Installation of structured cabling networks Offices of Empresa de Energía Eléctrica de Boyacá (Electric Utility Company) in Sogamoso.



CONSULTING AND ENGINEERING MAIN PROJECTS

PNUD- UNDP	 Preparation and validation of an Efficient Energy Management Plan -PGEE- for Mining and Energy Planning Unit UPME In the framework of the Energy Efficiency Labeling Project in Colombia- GEF / UNDP / COL / 76979
SACYR	 Basic Engineering and costing of HV substations and lines 220kV. Land valuation and environmental assessment.
	 Detailed Engineering of HV Line 115kV and 3 Substations 115/13.2 kV , Chocó hydroelectric generation project
Codensa ENEL	 Field surveying and detailed engineering of MV and LV projects in Bogotá and rural areas.
Empresa de Energía de Boyacá EBSA	 Detailed engineering for115kV transmission lines, Tunja Chiquinquirá 60km and Sogamoso - Boavita 80km
	 Primary and Secondary Engineering for the 230 kV bay (ISA - Intercolombia) of the Sochagota project, which has a double bar arrangement with transfer switch
	 Basic Engineering for San Antonio Substation 230 / 115kV 300MVA and 230kV double circuit interconnection line, 28km. Environmental, social and Land Valuation Assessment.
USAID- Tetra Tech - Ministerio de Minas y Energía MME	 Consultancy for the Colombian government in order to elaborate the Technical Regulatory frame for the low consumption final users renewable generation connection to the National Interconnected System Network
Parque Industrial Cartagena	 Basic engineering for the installation of a photovoltaic power generation park on the Colombian Caribbean coast. 25MW
Secretaría de Hábitat de Bogotá	■ Energy Auditing to the headquarters building in Bogotá
UPME 04,06, 14, 15	 Conceptual design of transmission HV lines and substations for UPME BOM projects 115kV, 220kV, 500kV in Colombia.
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Programa de Naciones Unidas para el Desarrollo PNUD (UNDP)	 Energy Auditing in government buildings: government of Antioquia, Ministry of Mines and Energy
Banco Interamericano de Desarrollo – BID (IADB)	 Consulting services for technical evaluation of all the components, cost adjustment of equipment, materials and labor of the construction project of the Amarateca electrical switching and distribution substation 230/138 / 34.5 kV., Transmission line in 230 and 138 kV, and the expansion of Zamorano substation 69/34.5kV.
Empresa Nacional de Energía Eléctrica de Honduras - ENEE (Electric Utility Company)	 Supervision of the design and execution of the technical works and environmental scope (EIA) of the expansion works of Las Flores and Danlí substations - Contract No.014 / 2011 - and the construction and commercial operation of the 69kV transmission lines "Las Flores - Erandique" 63km and "Danlí - Chichicaste"
Empresa de Energía del Quindío EDEQ – EEPPM Electric Utility Company	 Supervision of network expansion projects and tasks of electrical losses reduction in EDEQ electric utility area of influence
SNC Lavalin Colombia	 Detailed electrical engineering for the assembly of motors and injection pumps, control panels and plant automation for several Ecopetrol and Petrobras projects.
Electrificadora de Santander SA, ESSA ESP. Electric Utility Company	 Detailed engineering projects for ESSA (local electric utility company) and Ecopetrol (main Colombian oil company) electrical system. Lines 34.5kV, 70km, 115kV, 18km. Substations 115/34.5 and 3 34.5/13.2kV
Sociedad Puerto de Tribugá S.A.	Feasibility studies for the construction of the Jurubidá Small Hydro Power Plant in the Department of Chocó, Colombian pacific coast. Electromechanical, hydrological, social and all environmental studies (EAA, EIA, Forestry and prior consultation with communities) for the construction of the SHP.
Electrificadora de Santander- ESSA Electric Utility Company	 Supervision of ESSA Electric Utility Company loss reduction projects in the Barrancabermeja area. PRONE 5
Interconexión Eléctrica SA – ISA	Detailed design of transmission lines for Interconnecting the San Juan River, bajo San Juan River, bajo Baudó river and Sipí communities, in the Department of Chocó, for the DISPAC Operator. Detailed technical studies, social management in prior consultation, environmental impact studies in protected areas, forest managing studies and studies to request the exclusion of reserve areas. 188km.
Empresa de Energía del Quindío EDEQ. Electric Utility Company	 Field Surveying of the whole electrical infrastructure of the company, seeking the risks associated with the operation, planning and valuation of the expansion plan and the electric risk reduction plan, data filling to GIS





software and valuation of assets.

Acueducto Metropolitano de Bucaramanga Water Utility Company	 Design of Small Hydroelectric Plant taking advantage of water flow from supply pipes of the Water Utility Company of the city of Bucaramanga: Technical, Regulatory, Financial and Environmental Design (EIA and forest exploitation). Business structuring for Third party's EPC
Empresa de Energía de Casanare Electric Utility Company	 Planning study of short, medium and long term for the Casanare electrical system operated by Enerca. Prospective study by scenarios, modeling of the system, analysis of load flows, valuation of adjustments, tariff impact and financial analysis. 230kV, 115kV, 34.5kV. Planning of the company system expansion in MV and HV.
Dispac S.A. ESP.	 Detailed design of electric, civil, control and communications works of the Istmina Substation 115- 34.5-13.2kV. 10 MVA, Departament of Chocó.
Banco Interamericano de Desarrollo- BID - PADECO LTD. (IADB)	Consulting to find energy alternatives for the Colombian Pacific coast. In Association with Padeco Ltd., of Japan. Energy solutions studied were based on GN, LPG, Wind, Diesel-PV Hybrids, PV, Biofuels (cane ethanol, palm and jatropha biodiesel), network Interconnections, etc., and solution to the service or improvement projects were elaborated to short, medium and long term, for the municipalities of Bahía Solano, Nuquí and Bajo Baudó. Designs and budgets of short-term solutions were made. A very detailed study of the environmental impacts of the execution of these projects in the Chocoan jungle was made.
Unidad de Planeación Minero Energética UPME	 Consultancy for the modification of the methodological criteria for the elaboration of the Indicative Plan of Expansion of Electric Coverage in Colombia -PIEC- Consulting for the characterization of the energy consumption of the Colombian industry by sectors, processes and final uses. Development of databases for the treatment of information and consultation via WEB Consultancy for the strategic formulation of the plan of Rational Use of Energy and Non-Conventional Renewable Energy Sources 2007 - 2025. Development of databases for the treatment of information and consultation via WEB. Different policy scenarios were worked on based on a statistical study with primary and secondary information. BRP was responsible for the study of biofuels. Inventory (infrastructure and technology) and diagnosis of electricity service supply in rural areas of Colombia (off grid). 1st phase of databases development for the



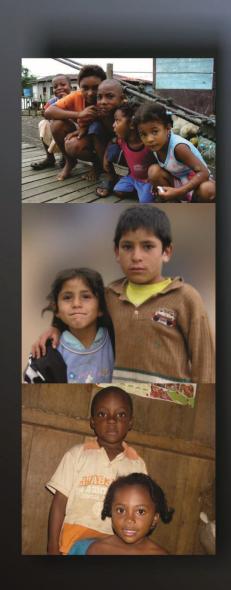


	information treatment and consultation via WEB. Final customer Service delivery scenarios were elaborated based on electricity generation through the use of ethanol and biodiesel produced in remote regions with self-sustainable projects.
Pacific Rubiales- Meta Petroleum	 Support consultancy for the start-up of the distribution networks of the oil wells and the generation system of Campo Rubiales, in the Department of Meta.
Electrificadora de Santander - ESSA ESP	 Supervision to the processes of non-connected or fraud customers connection to the network in the Barrancabermeja area.
Harken de Colombia	Study for connecting to the network of three oil production wells in the department of Casanare. Detailed design for 2 cit Wells Substations in 24 51/4.
	 Detailed design for 3 oil Wells Substations in 34.5kV: Tilodirán 2 - 0.5 MVA, Tilodirán 3 - 0.5 MVA and Boral 1MVA.
	 Detailed design of the connection to the network of the Tilodirán and Boral oil wells
Gobernación de Norte de Santander – MPS Ingeniería	■ Feasibility project for the assembly of an anhydrous ethanol production plant based on sugar cane, for a capacity of 250,000 liters/day, in the Zulia River Irrigation District. The work was done with the community of farmers for their organization in promoting society and the entire project was technically studied, involving crop management, transportation, production, environmental treatment, electric power generation and market research.
Electrificadora del Meta SA, EMSA ESP Electric Utility Company	Inventorying and characterizing the electric network (LV and MV networks) equipment, users and street lighting luminaires in coverage municipalities of the Electric Utility Company of Meta -EMSA- and to incorporate the information into the GIS database for doing the network planning for the next 20 years.
Empresa de Energía de Cundinamarca, EEC SA ESP Electric Utility Company	 Supervision for the field surveying and geo-referencing of the physical inventory, the Customer - Transformer - Circuit link, the macro metering and the supply of distribution management software.
Electronorte S.A Grupo Distriluz Electric Utility Company	 Study for the construction of the Small Hydro Power Plants of Buenos Aires, Chiriconga and Guineamayo, in the province of Lambayeque, Peru.
Empresa de Energía del Casanare ENERCA SA ESP Electric Utility Company	 Financial evaluation of investment projects in expansion of rural networks in the Department of Casanare





Distribuidora del Pacifico, DISPAC SA ESP	 Supervision of the construction of distribution networks in several municipalities of Chocó.
	 Field Surveying and detailed designs of rural distribution networks in 13.2 kV. 206 km. Department of Chocó. Contract 099-05
Electric Utility Company	 Field Surveying and detailed designs of rural distribution networks in 13.2 kV. 187 km. Department of Chocó. Contract 090-05 Technical and administrative supervision of contracts for remodeling of distribution networks in the department of Chocó
Empresa de Energía de Boyacá EBSA	
SA ESP	 Diagnosis of quality and continuity of electricity service in the Department of Casanare.
Electric Utility Company	in the Department of Casanare.
Municipio de Francisco Pizarro	Pre-feasibility studies for the interconnection of the
Salahonda, Nariño.	municipality with the SIN National Interconnected System.
Municipio de Labranzagrande	 Design of rural MV and LV networks, demand calculation and forecasting, economic feasibility for finding government funding
Municipio de Pisba	 Design of MV and LV rural networks, demand calculation, hydroelectric micro power plant design, economic feasibility for finding government funds.
Ministerio de Educación Nacional.	 Technical consultancy for the analysis and viability of educational infrastructure projects (civil, electrical and architectural) presented by the municipalities to the Education Ministry.
	 Geographical Information System for the management of the Public Lighting of Sogamoso.
Compañía de Servicios Públicos de	Supervision of the Financial Valuation of the company.
Sogamoso, Coservicios SA ESP.	 Audit to the feasibility study for the Public Lighting Service.
Nueva Base British Petroleum, BPXC, Yopal.	Energy and Communications Consulting.



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