Solar Energy South Africa

Dominican Republic electrical power grids

Overview

This project aims to: (i) strengthen the Government's regulatory and consumer protection performance, (ii) improve policy formulation and implementation, (iii) design the transmission grid and the wholesale power market, (iv) increase the quantity and quality of electricity for the poor, and (v) protect the environment.

The power sector in the has traditionally been, and still is, a bottleneck to the country's economic growth. A prolonged electricity crisis and ineffective remedial measures have led to a vicious cycle of regular blackouts, high operating costs of the distribution companies, large losses including electricity theft through illegal connections, high retail tariffs to co. The power sector in the has traditionally been, and still is, a bottleneck to the country's economic growth. A prolonged electricity crisis and ineffective remedial measures have led to a vicious cycle of regular blackouts, high operating costs of the distribution companies, large losses including electricity theft through illegal connections, high retail tariffs to cover these inefficiencies, low bill collection rates, a significant fiscal burden for the government through direct and indirect subsidies, and very high costs for consumers as many of them have to rely on expensive alternative self-generated electricity. According to the World Bank, the revitalization of the Dominican economy depends greatly on a sound reform of the sector.

Installed capacity in the Dominican Republic is dominated by thermal units fired mostly by imported oil or gas (or). At the end of 2006, total installed capacity of public utilities was 3,394 , of which 86% was an. Installed capacity in the Dominican Republic is dominated by thermal units fired mostly by imported oil or gas (or). At the end of 2006, total installed capacity of public utilities was 3,394 , of which 86% was and 14% was . The detailed share for the different sources is as follows: The large coal-fired Punta Catalina power plant has been accused of causing considerable soil, water and pollution, reportedly affecting the health and livelihoods of local residents. Source: Electricity Superintendence Statistics, 2006 Total electricity generated in 2006 was 10.7 TWh. Generation experienced a 7.7% annual increase between 1996 and 2005. However, between 2004 and 2006, there has been an average annual decrease of about 10% in total electricity generated., Planned expansionCurrently, there are plans for the construction of two 600MW coal-fired plants, Montecristi and Azúa, by the . It is also expected that, by 2012, an additional 762MW of capacity will have been added to the generation system. The first three hydropower plants with a combined capacity of 240MW are: .

Distribution networks cover 88% of the population, with about 8% of the connections thought to be illegal. Government plans aim to reach 95% total coverage by 2015.

Service quality in the Dominican Republic has suffered a steady deterioration since the 1980s. Frequent and prolonged blackouts result mainly from financial causes (i.e. high system losses and low bill collection) that are further aggravated by technical factors (i.e. unadequate investments in transmission and distribution). Poor service quality is also characterized by large voltag. Service quality in the Dominican Republic has suffered a steady deterioration since the 1980s. Frequent and prolonged blackouts result mainly from financial causes (i.e. high system losses and low bill collection) that are further aggravated by technical factors (i.e. unadequate investments in transmission and distribution). Poor service quality is also characterized by large voltage and frequency fluctuations. Interruption frequency and durationThe transmission system in the Dominican Republic is weak and overloaded, failing to provide reliable power and causing system-wide blackouts. East-west and north-south transmission lines need to be reinforced in order to deliver electricity to the capital and northern regions and to transmit power from the new power plants in the eastern region. Distribution lossesDistribution is the most dysfunctional element of the country's power system. Distribution losses in the Dominican Republic have historically been high and have increased even further in recent years. In 2005, the percentage of losses was 42.5%, up from 28.5% in 2002. This is far above the 13.5% average for . Sustained poor service quality and relatively high prices have induced theft through illegal connections and non-payment of electricity bills. Recent data for 2007 show that only about 59% of power purchased by the distribution companies is eventually paid for by consumers (88% would be the target percentage for a well-managed distribution company). Alt.

Policy and regulationThe National Energy Commission (Comisión Nacional de la Energía, CNE) is the policy agency, one of its main responsibilities being the elaboration of the National Energy Plan. The CNE presented in 2004 the National Energy Plan for the period 2004-2015 as well as the Policy and regulationThe National Energy Commission (Comisión Nacional de la Energía, CNE) is the policy agency, one of its main responsibilities being the elaboration of the National Energy Plan. The CNE presented in 2004 the National Energy Plan for the period 2004-2015 as well as the for the period 2006-2020. The Electricity Superintendence (Superintendencia de Electricidad, SIE) is the regulatory agency, while the Coordination Agency (Organismo Coordinador, OC) was created to coordinate dispatch of electricity. The Dominican Corporation of State Electricity Companies (Corporación Dominicana de Empresas Eléctricas Estatales - CDEEE) is a holding company

that brings together all government-owned generation, transmission and distribution companies and associated government programs in the country. It consists of: • the Hydroelectricity Generation Company;• the Electricity Transmission Company, ETED;• the Rural and Suburban Electrification Unit, UERS;• the Blackout Reduction Program, PRA;• 50% of the North Distribution Company, EdeNorte;.

As it has been described, most electricity generation in the Dominican Republic comes from thermal sources. Only 14% of the installed capacity is , with this percentage falling to below 9% when all the thermal self-generation is accounted for. The exploitation of other renewable resources (i.e. ,) is very limited. Ho. As it has been described, most electricity generation in the Dominican Republic comes from thermal sources. Only 14% of the installed capacity is , with this percentage falling to below 9% when all the thermal self-generation is accounted for. The exploitation of other renewable resources (i.e. ,) is very limited. However, this situation is expected to change following the enactment of in May 2007 of the (Law No. 57-07). Among other incentives, this law establishes financing at favorable interest rates for 75% of the cost of equipment for households that install renewable technologies for self-generation and for communities that develop small-scale projects (below 500 kW). HydroelectricityAs it has been mentioned, Egehid's expansion plan contemplates the addition of 762MW of capacity in the period 2006-2012. According to CDEEE, the first of the new series of dams and hydropower plants - Pinalito - is a "model of environmental management", with only 12 families resettled and extensive reforestation. WindA 2001 study estimated that the Dominican Republic had a wind generation potential of 68,300GWh per year, equivalent to more than six times its current power production. Solar.

The situation prior to the reformsPrior to the 1990s reform, the Dominican power sector was in the hands of the state-owned, vertically-integrated Corporación Dominicana de Electricidad (CDE). The operation of the company was characterized by large energy losses, poor bill collection and deficient op. The situation prior to the reformsPrior to the 1990s reform, the Dominican power sector was in the hands of the state-owned, vertically-integrated Corporación Dominicana de Electricidad (CDE). The operation of the company was characterized by large energy losses, poor bill collection and deficient operation and maintenance. During the 1990s, the rapid growth in the power sector mirrored the high economic growth experienced by the country. Total electricity demand increased at an annual rate of 7.5% in the years 1992-2001, while annual GDP growth was 5.9%. Generation capacity was not enough to meet peak demand, which translated into continuous supply constrains and widespread blackouts lasting up to 20 hours. In the mid-1990s, in order to address generation capacity shortages, several Independent Power

Producers (IPPs) where encouraged by the government to sign Power Purchase Agreements (PPAs) with the CDE. The result of these deals, often nontransparent and negotiated, was high electricity prices. Sector reforms: 1997-2002Sector unbundling and privatizationThe government, aiming to solve the enduring problems of the lack of available installed capacity and constant blackouts, enacted the Public Sector Enterprises Reform Law, which provided the framework for the privatization and restructuring of the power sector. In 1998-1999, under the first government of , the sector was unbundled and the vertically state-owned monopoly, Corporación Dominicana de Electricidad (CDE), was broken into a number of genera.

How does the Dominican Electricity Company work?

The Dominican Transmission Electricity Company operates interconnected transmission and runs high-voltage electric transmission projects, while state-owned distribution companies serve three regions of the country.

Does the Dominican Republic have electricity?

Like many island nations, the Dominican Republic is highly dependent on imported fossil fuels, leaving it vulnerable to global oil price fluctuations that directly impact the cost of electricity. Before 1997, the electricity market in the Dominican Repub-lic was regulated and state-owned.

Will Dominican Republic have a new grid code?

Energynautics’ experts have thus far conducted a gap analysis of the current regulation and drafted a revised grid code, which will be reviewed by the regulatory institution for power generation in the Dominican Republic.

Why is the electricity sector in the Dominican Republic in crisis?

As previously described, the precarious situation of the electricity sector in the Dominican Republic is not caused primarily by limited generation capacity. Although a reduction of losses may provide a more economic way of resolving the crisis, there are plans for significant new investments in new generation capacity, especially in hydropower.

Will the Dominican Republic produce 25% of its electricity by 2025?

The country aims to produce 25% of its electricity from renewable energy

sources by 2025. The Dominican Republic's Nationally Determined Contribution (2020 revision) calls for a 27% reduction in greenhouse gas emissions by 2030 relative to business as usual, up from 25% in the country's original NDC.

How many transmission lines are there in the Dominican Republic?

The transmission system, which is under the full responsibility of the state-owned company ETED (Electricity Transmission Company), consists of 940 km of 138kV single-line circuit lines that radiate from Santo Domingo to the north, east, and west. In the Dominican Republic, there are three distribution companies.

Dominican Republic electrical power grids

Evaluation of primary frequency regulation in Dominican Republic ...

Vehicle-to-grid (V2G) technology enables other uses of electric vehicles (EVs) when a power grid requires ancillary services (Bonsu, 2020).However, researchers must investigate the challenges hindering V2G technology, such as its high initial infrastructure investment, battery lifespan degradation, the need for better incentive regulations and policies ...

Greening the Power Grid in the Dominican Republic

The Dominican Republic has established tax incentives and other measures to encourage development of renewable energy. Rooftop solar has increased significantly, due to a net metering system that allows ...

ETI Energy Snapshot

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ENERGY PROFILE Dominican

Republic

Avoided emissions based on fossil fuel mix used for power Calculated by dividing power sector emissions by elec. + heat gen. LATEST POLICIES, PROGRAMMES AND LEGISLATION Electricity generation trend ELECTRICITY GENERATION ENERGY AND EMISSIONS CO 2 emissions by sector Elec. & heat generation CO 2 emissions in Per capita electricity ...

Dominican Republic: Report Updates Progress in Electric Mobility

According to the data, the addition of electric vehicles to the power grid can lead to overloading of grid assets. With the current projection of electric vehicle adoption for the Dominican Republic, national electricity consumption can be expected to increase by 3% to 6% by 2030 as a result of electromobility. Jhonattan González Search.

LAC DOMINICAN REPUBLIC

into the power grid; and promoting energy-efficient initiatives to reduce greenhouse gas emissions. Five-Year Country Trends As a Small Island Developing Nation (SID), the Dominican Republic faces unique Development Agency (USTDA) to the Superintendent of Electricity (SIE) of the Dominican Republic, a regulatory roadmap for energy storage

Dominican Republic: Report Updates Progress in ...

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projection of electric vehicle adoption for the Dominican Republic, national electricity consumption can be ...

Grid integration assessment

Wind power Hydropower ICE Gas turbine Steam turbine Solar Generation 29% 5% 15% 32% 7% 9% 2% MW = megawatt GW = gigawatt GWh = gigawatt hours PV = photovoltaic ICE = internal combustion engine Dominican Republic Grid tegration@Irena (c) IRENA 2020 Based on a grid assessment study (IRENA, 2019) carried out at the request of

Power outages threaten tourism in Las Terrenas

Las Terranas.- Municipal authorities of Las Terrenas recently met with Luz y Fuerza, the town's electricity distributor, to explore solutions for the area's unreliable electricity supply. This is due to the limitations of the current line connecting Las Terrenas to the National Interconnected Electrical System (SENI). The meeting included Mayor Eduardo Esteban ...

RENEWABLE ENERGY PROSPECTS: DOMINICAN REPUBLIC

Dominican Republic The Dominican Republic's total demand for final energy will grow by 2.2%

per year between now and 2030, reaching 7 677 ktoe 3 From the total installed capacity in this year, the SENI accounts for 3.7 GW and the autoproducers and off-grid installations represented about 0.9 GW and 0.3 GW respectively.

CLEAN DEVELOPMENT MECHANISM

"Grid Emission Factor for the Dominican Republic" submitted by the designated national authority (DNA) of the Dominican Republic. 7. This standardized baseline is derived from version 07.0 of the grid tool. Keywords: Dominican Republic, electric power transmission, grid emission factors, standardized baselines . Author: Wavinya Malinda

Powering the Future through Research , Dominican Republic

Having a reliable electrical grid is difficult for island nations like the Dominican Republic, as they are much more vulnerable to climate shocks. According to the 2021 Global Climate Risk Index, the Dominican Republic is one of the most vulnerable countries in the world to climate change.

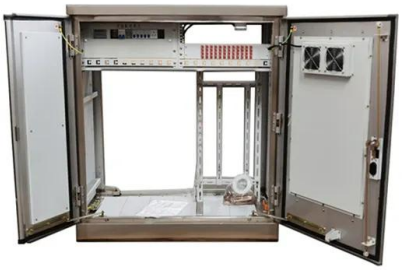
Marranzini unveils plan to revive Dominican electrical system

This is the usual empty political rhetoric over fixing the faults of the Dominican electric generation and distribution system. The public has suffered it and the lack of electric power

years on end. Action to fix the issue is the desired substitute for speechmaking. Action, the road less traveled, is a rare commodity in the RD.

Wärtsilä Receives EUR150m Dual-Fuel Power Plant Order from Dominican Republic

The plant is scheduled to be fully operational during the second half of 2013, and will supply baseload electricity to the national grid. EGE Haina is a 50% state-owned and 50% privately owned company and it owns several power plants in the Dominican Republic, including a 150MW barge-mounted power plant supplied by Wärtsilä.



Dominican Republic Power Inverters and Solar Panels

Off-grid, mobile and backup electrical systems in Dominican Republic run on AIMS Power products. Here is a list of our products that will work properly with the electrical system in Dominican Republic: All the AIMS Power inverters and products available in Dominican Republic are listed below: 12 Volt Modified Sine Inverters. Download Brochure

Dominican Republic's Electricity Reforms Lower Government ...

Tighter cash management and the timely payment of public electric utilities' power purchase liabilities to electricity generators have reduced the utilities' interest expense in 2H20 and 1Q21. "Dominican Republic's Electricity Reforms Lower Government External Financing Needs", is available at or by clicking

ing Capacity in Dominican Distribution Grids - Final Report

9.2 Active power-dependent voltage control at the HV/MV transformer 75 9.3 Wide area voltage control at the HV/MV transformer 77 9.4 Reactive power control of PV inverters (cosphi(P) and Q(U) control) 79 9.5 PV generation cap at 70% of installed panel capacity 83 9.6 PV peak shaving by battery usage 85

Dominican Republic: Energy Country Profile

Dominican Republic: Many of us want an overview of how much energy our country consumes, where it comes from, and if we're making progress on decarbonizing our energy mix. Dominican Republic: How much of the country's electricity comes from nuclear power? Click to open interactive version. Nuclear power - alongside renewables - is a

Dominican Republic villages seek to electrify with solar ...

In a blog, the World Bank defined a minigrid as "an electric power generation and distribution

system that provides electricity to a localized community" and has said that they can include (along with solar) remote monitoring, smart meters and inexpensive battery storage plus geospatial analysis software to provide market intelligence.. The report shows that many ...

Underwater cable linking Puerto Rico and the Dominican Republic

Santo Domingo.- Caribbean Transmission Development (CTDC) plans to install an underwater power line between the Dominican Republic and Puerto Rico to provide electricity to the neighboring country. According to the Puerto Rican newspaper El Nuevo Día, the Electric Power Authority (PREPA) and LUMA Energy are exploring measures to stabilize the ...

Who We Are

Who We Are Our Company CEPM is a private company belonging to the Dominican Republic´s electricity sector. It generates, transmits, distributes and markets energy in the tourist region of Punta Cana-Bávaro and Bayahíbe, with an available installed capacity of 315 MW. We supply energy solutions and reliable complementary services, promoting sustainable development in ...

Dominican Republic's CEPM and GE to Modernize Punta Cana's Electrical Grid

SAN DIEGO-February 4, 2015-GE (NYSE: GE) has been selected by Consorcio Energético Punta Cana Macao (CEPM)-a standalone electrical utility, generating, transmitting and distributing electricity in the exclusive concession area of Bávaro and Punta Cana in the east of the Dominican Republic-to deliver more than 14,000 smart meters and GE's

Energy profile: Dominican Republic

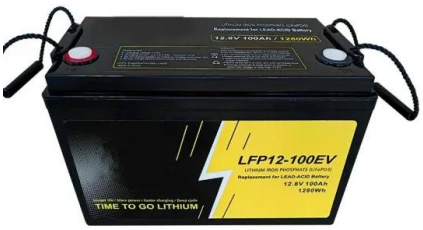
The Dominican Republic produced 18.6 TWh of electricity in 2020; fossil fuels accounted for nearly 85% of production, followed by hydro (6.68%), wind (6.11%), solar (1.64%) and biofuels (0.90%). The DR has a high incidence of power outages compared to other countries in Latin America and the Caribbean. [3]

Project Hostos

Caribbean Transmission Development Company is developing an underwater high-voltage DC cable between Puerto Rico and the Dominican Republic that will interconnect each island's electrical grid. Before installing the submarine cable on the bottom of the sea bed, the subsea terrain is studied and evaluated to determine the best cable route.

USTDA Advances Energy Storage Systems in the Dominican Republic

Arlington, VA - The U.S. Trade and Development Agency has awarded a technical assistance grant to the Dominican Republic's Superintendent of Electricity (SIE) that will facilitate the growth of



renewable power generation in the country TDA's grant will help create enabling regulations for battery energy storage systems to maintain the stability of the country's power grid as new ...

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