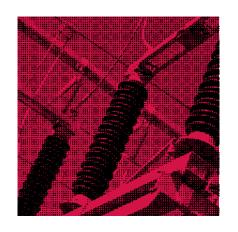
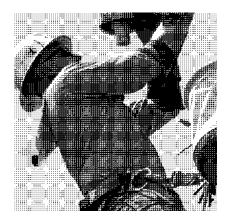
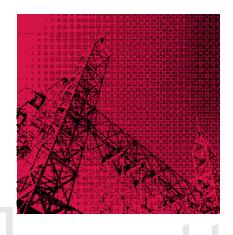


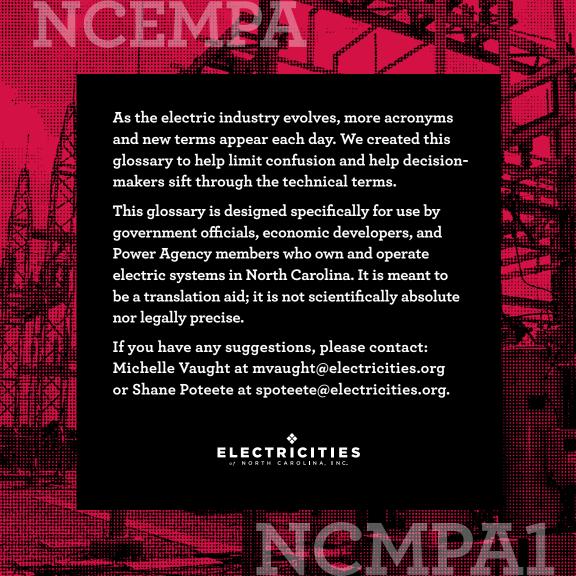
# load factor













#### acid rain

Precipitation containing harmful amounts of nitric and sulfuric acids created by the chemical reaction of sulfur oxides and nitrogen oxides with water vapor in the atmosphere. Acid rain is produced mainly by the combustion of fossil fuels in power plants, industrial boilers, private homes and automobiles.

#### administrative and general (A&G)

Used in accounting to describe expenses.

## advanced metering infrastructure (AMI)

An integrated system of smart meters, communications networks and data management systems that enables two-way communication between utilities and customers.

#### all-requirements customer

A municipality that purchases all of its electrical power from a single supplier, such as a Power Agency.

#### allowance for funds used during construction (AFUDC)

Allows a utility to earn a return on costs that were prudently incurred during the construction of major facilities.

#### **American National Standards Institute (ANSI)**

A private nonprofit organization that oversees the development of voluntary consensus standards for products, services, processes, systems and personnel in the U.S.

#### **American Public Power Association (APPA)**

A national trade association whose membership includes a majority of the country's more than 2,000 publicly owned electric utility systems. The association dropped the APPA acronym in early 2017.

## **American Society of Mechanical Engineers (ASME)**

A not-for-profit professional membership organization founded in 1880 that enables collaboration, knowledge sharing, career enrichment, and skills development across all engineering disciplines.

#### ampere

The unit of electrical current or flow.

#### Atomic Energy Commission (AEC)

Federal agency created in 1946 to manage the development, use and control of atomic (nuclear) energy for military and civilian applications. The AEC was subsequently abolished by the Energy Reorganization Act of 1974 and succeeded by the Energy Research and Development Administration and the U.S. Nuclear Regulatory Commission.

## **Atomic Safety and Licensing Board Panel (ASLBP)**

The independent trial-level adjudicatory body of the U.S. Nuclear Regulatory Commission.

#### availability

The percent of time that a generating unit is available to provide power.



## **Balance of Plant (BOP)**

The remainder of a power plant's infrastructure that supports major components such as boilers, turbines and generators.

#### base load plant

A plant that is normally operated to take all or part of the minimum load of a system, which consequently produces electricity at an essentially constant rate and runs continuously. Nuclear plants are examples of base load plants.

#### basis point

A measure of financial interest where 100 basis points equals 1 percent of interest.

#### bearer bonds

Bonds that do not have the owner's name registered on the books of the issuer and whose proceeds (both principal and interest) are payable to the holder, or bearer. (See registered bonds.)

#### billing determinants

Factors such as kilowatt-hours used or kilowatts of demand incurred during the billing period. These factors are multiplied by the applicable electric rate to calculate a bill.

## billing period

The period of time, typically one calendar month, in which a customer is billed for electrical usage.

## **Board of Commissioners (BOC)**

A decision-making board for each Power Agency. Each Power Agency Participant appoints a Commissioner and up to two Alternate Commissioners to the Board of Commissioners. The Board of Commissioners monitors operations of the Power Agency, approves the annual budget and elects representatives to the ElectriCities Board of Directors.

## **Board of Directors (BOD)**

The ElectriCities Board of Directors provides oversight of NCMPA1 and NCEMPA operations. The Board meets monthly and consists of 14 elected members and two appointed (ex-officio) members (the Chairs of each Power Agency Board of Commissioners). The elected board members serve three-year terms.

#### boiler

A large, closed container in which water is heated as it passes through a series of tubes and is turned into steam that can be used to drive a turbine and an electric generator.

#### boiling water reactor (BWR)

A type of light water nuclear reactor used to generate electrical power.

#### bond

A piece of paper signifying that the issuer of the bond borrowed money from the bondholder ("creditor"). A bond states the terms of the debt, including how long before the debt must be repaid and how much interest will be paid in the meantime. A stock, unlike a bond, is a receipt for property. Owners of stock share in profits and losses, but creditors get paid before owners get anything. Therefore, bonds are called "senior securities."

## bond anticipation notes (BANs)

Notes issued for a short period of time (usually three years) to obtain needed money for a Power Agency. Because the notes have shorter maturities, they have significantly lower interest rates than long-term debt.

#### bond resolution

The formal document that is approved by a Power Agency's Board of Commissioners to govern the issuance of bonds and the use of the proceeds thereof.

#### **British Thermal Unit (Btu)**

The amount of heat required to increase the temperature of a pound of water by one degree Fahrenheit, sometimes characterized as the amount of heat given off during the burning of an old-style wood kitchen match.

#### **Bulk Power Marketing (BPM)**

Purchases and sales of electricity between resellers, such as utilities, in the local and regional power markets.

#### bus (or bus bar)

An electrical connection, usually in the form of aluminum or copper bars, that allows for multiple circuits to be tied to a common point.



#### capability

The maximum electrical output that a generating unit can provide for a specific time period without exceeding its operational limits.

#### capacity

The ratings given by the manufacturer or the user to a generating unit, a generation plant, a transformer or other piece of equipment. A nameplate rating is the manufacturer's rating and is usually shown on a nameplate attached to the equipment. Capacity is also the ability to produce a given amount of power at an instant in time, measured in kilowatts or megawatts.

## capacity factor

The actual power generated over a period of time by a generating unit divided by the maximum power that could have been generated had the unit run at full capacity. A high capacity factor (90 to 100 percent) indicates that a unit has run at or near full capacity.

#### capitalized interest

Interest on bonds that is paid from the issuance of those bonds.

#### **Catawba Nuclear Station**

A two-unit pressurized water reactor (PWR) nuclear plant located in York County, South Carolina, and operated by Duke Energy Carolinas. NCMPA1 owns 75 percent of Unit 2.

#### chain reaction

A self-sustaining series of events in a nuclear reactor in which a neutron (a subatomic particle) splits an atom, releasing sufficient neutrons to cause many other atoms to split in the same way, which in turn split more atoms, etc.

## cogeneration

The dual production of electricity and another form of useful thermal energy (such as heat or steam) for use in commercial/industrial heating or cooling processes.

## coincident peak

The demand of a Power Agency, or a city, measured in kilowatts or megawatts, that occurs at the same time as the peak demand of the entity that is supplying the power.

#### combustion turbine

A jet engine-like turbine used in generating facilities designed for fast start up and used specifically for peaking capacity. Combustion turbines use natural gas or oil for fuel.

#### commercial operation

The point at which the owner of a generating unit that has been under construction declares it to be operational and capable of fulfilling its legal and regulatory obligations.

## commercial paper

Promissory notes, typically with maturities of 60 days or less and in denominations of at least \$100,000. The buyers of commercial paper are almost exclusively institutions, such as money market funds, pension funds and bank trust departments.

#### condenser

A large piece of equipment that uses water or air to cool the steam exhausted from a turbine so that it can be returned to the system as water.

## construction work in progress (CWIP)

This involves the construction of new utility facilities and the means to fund them until construction is complete. If recovery of the cost of CWIP is allowed, a utility can immediately begin receiving reimbursement for its expenses from its customers and begin earning a return on its investment without going through a formal rate-making process to determine if the costs were prudently incurred.

## containment building

The building that houses a nuclear reactor and is designed to contain any radioactive solids, gases or water so as to prevent their release into the environment.

#### control rod

A rod, plate or tube used to control or halt the chain reaction in a nuclear reactor by absorbing the neutrons that sustain the chain reaction.

#### control room

Operation center of a power plant.

#### coolant

The fluid, usually water, that is circulated throughout a condenser or nuclear reactor to transfer heat.

#### cooling tower

A very large structure that cools water from the condenser of a power plant through evaporation as it circulates within a moving stream of air.

#### cooperatives or co-ops

Customer-owned electric membership corporations (EMCs) that originated in the 1930s to bring electric service to remote and rural areas. Since 1965, the North Carolina co-ops have been private corporations. Municipal systems compete with co-ops and with private power companies for new customers and territory. Co-ops are sometimes called REAs, because they were authorized by the federal Rural Electrification Act.

#### core

The central part of a nuclear reactor. It contains the fuel and produces the heat needed to generate electricity.

#### coupon bonds

Bonds to which coupons are attached for each interest payment. The coupons are cut off as they come due (usually semiannually) and are presented to a Power Agency, or its agent, for payment.

#### critical

The term used to describe a nuclear reactor that is sustaining a chain reaction.



## decommissioning

The process of closing down a nuclear facility and reducing the residual radioactivity to a level that permits the release of the property and termination of the operating license. Nuclear power plants are required by the NRC to set aside funds during operation to cover their eventual decommissioning costs. (See NRC.)

#### default

Failure to honor contractual obligations, such as the failure or refusal of the issuer of bonded debt to pay the principal or interest when due, or failure to fulfill other agreed-to covenants.

#### delivery point

A point at which the power supplier delivers power to a participating municipality's distribution system.

#### demand

Every electric system has a demand, or load. Expressed in kilowatts or megawatts, demand is a measure of the rate at which electric energy is delivered to, or by, a system. The primary source of demand is the power-consuming equipment of the system's customers. Demand usually varies from minute to minute, hour to hour, day to day, and season to season.

## demand charge

Electric rates paid by large customers usually include two charges: demand and energy. The demand charge is based on the customer's maximum demand on the system and is associated with the fixed components, such as the monthly mortgage payments on a power plant, of the supplier's cost to provide electric service. (See ratchet.)

## demand-side management (DSM)

Actions in which a customer's energy usage and/or demand are curtailed or modified to achieve certain goals intended to benefit both the customer and the power supplier. For example, a customer's electric rate may be reduced in return for allowing the power supplier to turn off the customer's air conditioner for limited periods during a hot summer afternoon, enabling the power supplier to avoid operating very expensive generating units.

#### **Department of Energy (DOE)**

A government department whose mission is to advance energy technology and promote related innovation in the US  $\,$ 

#### distributed generation (DG)

The generation of energy by a variety of small, grid-connected devices or sources, such as small hydro, biomass, or solar, wind, or geothermal power. DG includes relatively small (2,000 kW or less) electric generators used to reduce a customer's peak demands and/or provide greater reliability, typically internal combustion engines operating on diesel fuel and located at customer-owned facilities.

#### distribution facilities

The relatively lower voltage system (typically less than 15,000 volts) of transformers, power lines, poles and meters that brings electricity from the higher voltage transmission system and reduces it further to a level that can be used by customers.

# E

## **Edison Electric Institute (EEI)**

An association of electric companies acting as an information exchange for its members and a public relations voice for the investor-owned electric industry (See IOUs).

#### electric energy

Electric energy can't be seen or heard. It is created by electric generators and converted by customers into other forms of energy, such as light, heat or motion. The amount of electric energy used by customers is typically measured in kilowatt-hours, while the bulk power market measures usage in megawatt-hours.

#### electric revenue bonds

Bonds secured by revenues from the operation of a publicly owned electric system. Typically, revenue bonds have no claim on the borrower's taxing authority. General obligation bonds (g.o. bonds) are bonds backed by a city's taxing power and credit and, because of that added security, generally carry lower interest rates than revenue bonds.

## electromagnetic fields (EMFs)

Fields produced by alternating current electric power. The fields are invisible lines of force that occur wherever electricity is being conducted. Some people claim that EMFs have harmful health effects. As of this printing, there is no conclusive evidence to support that claim.

## emergency core cooling system

A series of backup safety systems designed to dump thousands of gallons of water into a nuclear reactor in the event that the normal core cooling system fails.

#### emergency feedwater pumps

Backup pumps designed to supply water to steam generators (boilers) if the normal feedwater system should fail. Also called auxiliary feedwater pumps.

#### energy charge

Usually included in electric rates; reflects the amount of kilowatt-hours a customer uses and typically represents the variable components of the supplier's cost to provide electric service, such as fuel.

#### enriched fuel

Uranium that has been modified for use in nuclear power plants by increasing the concentration of uranium-235 to a level that will better sustain a chain reaction. (See chain reaction.)

#### entitlement

The specified percentage of the output and services of a generating unit to which a Power Agency (often because of its ownership interest) and its participating municipalities are entitled under contract.

#### **Environmental Protection Agency (EPA)**

The federal agency that can require environmental impact statements and reports.

#### **Electric Power Research Institute (EPRI)**

An independent, nonprofit center for electricity and environmental research.



## Federal Energy Regulatory Commission (FERC)

A quasi-independent regulatory agency within the Department of Energy with jurisdiction over interstate electricity sales, wholesale electric rates, hydroelectric licensing, natural gas pricing, oil pipeline rates and gas pipeline certification.

#### forced outage rate (FOR)

The percentage of hours during a year in which a generating unit is unable to operate due to unplanned circumstances.

#### fossil fuel

Fossil fuels, such as coal, oil and natural gas, originate from organic matter. They are also called conventional fuels.

## fuel assembly

A cluster of fuel rods. Groups of fuel assemblies make up a nuclear reactor core.

#### fuel clause

A utility's rates are set to recover various costs: debt payments, fuel costs, administrative expenses and so on. Of these, fuel costs are the most variable and can change markedly from month to month. Regular rates include an amount for basic fuel expenses. A fuel clause is an adjustable rate factor that rises or falls with increases or decreases in the price of fuel consumed during a given period.

#### fuel expense

The cost of the fuel that is used to generate electricity.

#### fuel pool

A large pool containing water in which spent nuclear fuel is stored.

#### fuel rod

A long, slender, hollow rod containing pellets of enriched uranium for use as fuel in a nuclear reactor. Fuel rods are assembled into bundles called fuel elements or fuel assemblies, which are loaded individually into the reactor core



#### general emergency

A state of emergency declared by a utility when an incident at a nuclear power plant poses a potentially serious threat that radiation could be released beyond the immediate area of the plant. (See site emergency.)

#### generation and transmission (G&T)

Usually refers to an electric cooperative whose business is limited to the generation and transmission of electricity for use by other cooperatives.

#### generation mix

A term used to describe the types of electrical generation a utility uses or presently has on-line (coal, nuclear, hydro, etc.).

#### generator

A machine that converts mechanical energy into electricity through the use of magnets and wire coils rotating at high speeds.

#### geothermal energy

Power generated from natural steam, hot water, hot rocks, or lava in the Earth's crust. In general, geothermal power is produced by pumping water into cracks in the Earth's crust and then conveying the heated water or steam back to the surface so that its heat can be extracted through a heat exchanger, where its pressure can be used to drive turbines

## gigawatt

One billion watts or one million kilowatts or one thousand megawatts.

#### green energy

A generic term for any type of energy that is considered to have a lower environmental effect than fossil fuel-produced energy. The term is relative and is subject to differing definitions and interpretations. It is generally interchangeable with "renewable energy."

## greenhouse effect

The increase in the earth's surface temperature caused by greenhouse gases in the atmosphere. The greenhouse effect allows solar radiation to penetrate the atmosphere but prevents the associated heat from returning to space.

#### greenhouse gases

Gases such as methane and carbon dioxide whose release into the environment contribute to the greenhouse effect.

#### grid

The system comprised of generators, transmission lines and distribution components that provides for the production and delivery of electricity within a region.



#### hazardous waste

Various toxic, radioactive, flammable or corrosive materials produced by industries, agriculture, research and other sources.

## high-pressure injection

A system capable of pumping as much as 1,000 gallons a minute into a nuclear reactor coolant system at very high pressure. This is part of the emergency core cooling system.

## hydroelectric plant

A facility that uses the force of falling water to turn turbine blades and spin generators to produce electricity.

## independent power producer (IPP)

An entity that owns, builds and operates electric generators for selling electricity in the bulk power market, but does not directly serve end-use electric customers and is not an electric utility.

#### independent system operator (ISO)

An entity that manages the operations of the transmission systems of multiple utilities as one interconnected system, but is not controlled by the utilities.

## infrared scanning

A process that determines the temperature of any object by measuring the amount of invisible infrared radiation emitted by the object. In the power industry, hand-held infrared scanners are used to detect "hot spots" in equipment such as transformers and generators that may signal a problem with the equipment. Infrared scanning is also used to determine the effectiveness of the insulation in a house by detecting areas of heat loss in winter or heat gain in summer.

## **Institute of Nuclear Power Operations (INPO)**

An industry association that promotes excellence in the operation of nuclear electric generating plants.

## interchange agreement

An agreement that includes a variety of services that utilities provide each other to increase reliability and efficiency and to avoid duplicating expenses. For example, with an emergency service agreement, one utility commits to furnish another with power in times of emergencies. Another example: With an economic exchange agreement, utilities agree to buy power from each other in order to avoid operating their own more expensive plants.

#### interconnection agreement

An agreement between two utilities to connect their transmission and generation systems in order to, for example, implement interchange agreements. Under an interconnection agreement between NCMPA1 and Duke Energy Carolinas, agency-owned power flows from the generating units to the participating municipalities' distribution systems.

#### interruptible power

Deliveries of electric energy and/or capacity that can be reduced, or curtailed altogether, at the discretion of the power supplier and with the prior agreement of the customer. The customer benefits by paying a lower electric rate, and the supplier is better able to manage its portfolio of resources and obligations.

#### investor-owned utilities (IOU)

Power companies such as Duke Energy Carolinas and Dominion Power that are owned by shareholders and sometimes referred to as "private power companies."



## joint action agency

An entity composed of two or more public power utilities that join together to own generation (and/or transmission) facilities, or parts of such facilities, in order to attain power costs that are lower than what could have been realized had they acted individually.



## kilovolt-ampere (kVA)

1,000 volt-amperes. A measure of the amount of electric power, including its associated inefficiencies, that a piece of equipment is capable of accommodating. The nameplate ratings of generators and transformers are given in kVA.

#### kilowatt (kW)

1,000 watts. A measure of the amount of electric power generated and the rate at which it is used. By comparison, if a kilowatt-hour is equivalent to the number of miles a car travels, a kilowatt is equivalent to the speed at which the car traveled.

#### kilowatt-hour (kWh)

A measure of the use of electric energy. One kilowatt-hour is the amount of electricity required to operate a 100-watt light bulb for 10 hours or 10 100-watt light bulbs for one hour.

## L

#### lead manager

The senior firm of the group of investment bankers that forms the syndicate for underwriting a bond issue. (See managing underwriters.) The lead manager, or senior manager, "runs the books" on the issue, meaning he or she is administratively in charge of the marketing, allocation, payment and delivery of the bonds. The lead manager deals directly with a Power Agency, various counsel and consultants, and the other members of the syndicate. He or she oversees document preparation, printing, and mailing, and receives a larger portion of the management fee and, with the other managers, a larger share of the bonds for resale.

## leased facilities fee (or leased facilities charge)

A fee that a utility pays to the owner of a transmission system for the use of facilities, such as delivery points, that are not included in the transmission owner's wheeling fee.

#### line loss

Electrical energy lost in the process of distributing it over power lines.

#### load

See demand.

#### load curve

A line on a graph used to show how the use of electric power (demand) rises and falls during a given period of time.

#### load factor

The ratio of average demand to peak demand. It reveals whether a system's electrical usage is reasonably stable or has extreme peaks and valleys. A high load factor is better than a low load factor because the demand charge is distributed over more kilowatt-hours and reduces the average cost of power.

#### load forecast

A projection of a system's future electrical requirements.

#### load management program

A program through which a utility seeks to control its customers' use of electricity (or loads) so as to reduce the system's total demand at a time of maximum (peak) usage. Load management can include such techniques as voltage reduction, remote control of air conditioners and water heaters, shifting the time in which a city pumps water and rotating blackouts.

#### load-side generation

Relatively small electric generators that are located on the customer's premises and connected directly to the customer's internal electric lines



## managing underwriters

A group, or "syndicate," of banking firms selected by a Power Agency's Board of Commissioners to head up the sale of an agency bond issue or issues. These firms agree to underwrite (guarantee the purchase of) a large block of the bonds and assemble a much broader group of banking firms to buy the rest of the issue. The bonds are then resold by the investment banking firms to corporate and individual investors. (See lead manager.)

## maximum net dependable capacity (MNDC)

The output that can be expected from a generating unit—net of any parasitic equipment such as pumps—when it is operating at full capacity. MNDC can vary depending on operating conditions.

#### **McGuire Nuclear Station**

A two-unit pressurized water reactor (PWR) nuclear plant located in Mecklenburg County and operated by Duke Energy Carolinas.

## megawatt (MW)

One million watts or one thousand kilowatts.

## metering period

The time period (about one month) during which electric usage is recorded at a meter point. This does not always coincide with the billing period since meters are not read on the last day of the calendar month if that day falls on a weekend or holiday.



#### net interest cost (NIC)

One of the two most common measures of interest rates for new bond issues. (See true interest cost.) Net interest cost is a measure of simple interest that takes into account the total amount of interest to be paid over the length of a loan, as well as any premium or discount by the underwriters.

#### **NIMBY**

An acronym for "not in my back yard," used to describe the attitude of people or entities who do not want any electric industry facilities (power plants, transmission lines, waste repositories, etc.) built on, near or within sight of their property or town.

## non-coincident peak

A Power Agency's, or individual municipality's, peak demand at whatever time it occurs, without relationship to the peak of the associated power supplier.

#### non-Power Agency member

A member of ElectriCities that is not a member of a Power Agency. These members have wholesale contracts with investor-owned utilities and are members of ElectriCities for trade-association services.

## North American Electric Reliability Corporation (NERC)

The organization certified by FERC to establish and enforce reliability standards for the bulk power system (i.e., transmission and large generation facilities).

## North Carolina Association of Municipal Electric Systems (NCAMES)

A nonprofit association and an affiliate of the N.C. League of Municipalities that exists to promote the interest and welfare of municipal electric systems in North Carolina. NCAMES hosts the annual lineman's rodeo competition.

#### North Carolina Eastern Municipal Power Agency (NCEMPA)

Power Agency comprised of 32 municipalities in eastern North Carolina. Also referred to as Eastern Agency.

#### North Carolina Municipal Power Agency Number 1 (NCMPA1)

Power Agency comprised of 19 municipalities in the piedmont and western part of the state. Also referred to as Agency 1.

## **North Carolina Utilities Commission (NCUC)**

In the area of electricity, the NCUC's primary function is to regulate the retail rates and customer services of North Carolina's investor-owned utilities and to determine whether the construction or sale of power plants is justified on the basis of meeting "public convenience and necessity." NCUC is charged with ensuring that utilities, including the Power Agencies' municipal utility members, comply with North Carolina Senate Bill 3's Renewable Energy and Energy Efficiency Portfolio Standard.

#### NOX

A generic term for nitrogen oxide (NO) or nitrogen dioxide (NO<sub>2</sub>), both of which are formed during the combustion of fossil fuels and contribute to the creation of smog and acid rain.

#### nuclear reactor

An apparatus in which nuclear fission (the splitting of atoms) may be sustained, as a chain reaction, and controlled. The fission creates heat, which heats water, which makes steam, which turns the turbine blades, which rotates the generator, which makes electricity.

#### **Nuclear Regulatory Commission (NRC)**

The federal agency responsible for licensing and safety of nuclear power plants.



#### official statement

A complex document containing information about an issue of bonds being offered and about the Power Agency that is issuing those bonds. A full disclosure of all facts pertinent to a potential investor is required in an official statement. A preliminary official statement, which is mailed before the bonds are priced, has red ink on its cover is called a red herring. When a private utility company prepares an official statement before the issuance of debt, it's called a prospectus.

#### on-line

When a generating plant is in operation, it is on-line (formerly "on the line"). When an operational unit is not on-line, it is said to be down or off-line.

## operation and maintenance (O&M)

All activities necessary to run a power plant in a safe and economical manner.

#### original issue discount bonds

Bonds that are initially issued at a cost below par, which is one of many possible marketing devices.

#### outage

An interruption in electric supply, either based at the local distribution system, the transmission system, the generating facility or combinations of all three. Outages can be planned or unplanned. Planned outages allow utilities to perform needed equipment maintenance.

#### ownership interest

The portion of a facility, such as a generating plant or unit, in which an entity has acquired an ownership position, typically expressed as a percentage of the entire plant or generating unit.



## **Participant**

A municipality that has an ownership interest in North Carolina Municipal Power Agency Number 1 (NCMPA1).

## par value

The principal amount of a bond; the amount of money due at maturity.

#### peak demand

The maximum demand (load) of an electric system during a given period of time: an hour, day, month or year. (See demand.)

#### peaker plant

An electric generating plant that does not operate continually.

## plug-in hybrid electric vehicle (PHEV or PHV)

A hybrid vehicle with rechargeable batteries that can be restored to full charge by connecting a plug to an external electric power source (usually simply a normal electric wall socket). Also known as a plug-in hybrid.

## polychlorinated biphenyl (PCB)

PCB is a carcinogen formerly used in electric system components such as transformer and switchgear oils.

#### **Power Agency**

Joint action Power Agencies were first formed in North Carolina in 1976 to develop generation facilities. North Carolina Municipal Power Agency Number 1 (NCMPA1) is comprised of 19 municipalities in the piedmont and western part of the state. North Carolina Eastern Municipal Power Agency (NCEMPA) is comprised of 32 municipalities in eastern North Carolina.

#### power sales contract

An agreement between a participating municipality and a Power Agency. It defines the relationship and responsibility that each has to the other in an agency's joint action project.

## precipitator

A device designed to remove fine particles (soot) from coal flue gas by endowing them with an electric charge and then passing them over an oppositely charged collector plate. It is used at coal-fired generating units.

## pressurized water reactor (PWR)

See steam generator.

## pricing

Pricing a bond issue is the process of determining interest rates and the underwriters' spread during the process of marketing the issue. (See spread.) Ideally, pricing provides a rate that is both fair (to a Power Agency and the underwriters) and marketable.

#### private power companies

See investor-owned utilities.

#### project financing

A type of financing agreement that allows additional bonds to be issued only for the completion or betterment of a specific project. (See system financing.)

#### project power

A Power Agency's share of the output (both capacity and energy) from generating units in which the agency has an ownership interest.

#### **Public Staff**

The Public Staff of the N.C. Utilities Commission. It is the responsibility of the Public Staff to represent "the using and consuming public" in all matters coming before the Commission.

## **Public Utility Regulatory Policies Act (PURPA)**

The Public Utility Regulatory Policies Act, passed in 1978, PURPA requires states to implement utility conservation programs and create special markets for cogenerators and small power producers.



#### quality assurance (QA)

A system for ensuring a desired level of quality.



#### ratchet (or demand ratchet)

A rate provision whereby the greater of the current demand reading or any of the highest demand readings from previous months is used to establish a minimum current billing demand. The purpose of a ratchet is to equalize among all customers in a given class the added cost of supplying peak power demand.

#### rate case

The process in which a utility seeks approval from a regulatory entity of the electric rates that the utility charges its customers. A rate case usually involves formal legal proceedings in which large amounts of complex information about the utility's costs, finances, power plants, customer requirements, etc., are reviewed by multiple intervening parties over the course of weeks or months, culminating in a decision by the regulatory entity about the reasonableness of the proposed rates.

#### rate stabilization fund

An accounting device that sets aside funds to mitigate future cost increases so that the rates a Power Agency will have to charge its participating municipalities in the future will be either lower or more stable (or both) than they otherwise would have been.

## rating agencies

Moody's Investors Service (Moody's), Standard and Poor's (S&P) and Fitch Ratings are the principal independent investor service organizations. They specialize in collecting, analyzing and publishing financial information and provide for individual bond issues ratings that are designed to reflect the quality of the security involved in the debt. The higher the rating a Power Agency's bonds has, the less interest it will have to pay to successfully market the issue

#### reactor coolant system

Part of a system of circulating water that cools the reactor core by removing heat created by a nuclear chain reaction.

#### reactor vessel

The steel tank containing the reactor core. (See core.) It is also called the pressure vessel.

## refueling outage (RFO)

A planned outage of a nuclear reactor to refuel it. Often additional maintenance is performed during an RFO.

## regional transmission organization (RTO)

An electric power transmission system operator that coordinates, controls and monitors a multistate electric grid.

## registered bonds

Bonds whose principal and interest are payable only to the owner whose name appears on the front of the bond and who is registered with the issuer of the bond, or with the issuer's agent. A registered bond can be transferred only when endorsed by the registered owner. Interest payments are made by the issuer directly to the registered bondholder. Since July 1, 1983, all municipal bonds have been registered bonds.

#### reload fuel

About once a year, approximately a third of the fuel in a nuclear reactor core has to be replaced with unspent (unused) fuel.

## Renewable Energy and Energy Efficiency Portfolio Standard (REPS)

A system of rules and regulations (see Senate Bill 3) in which IOUs, cooperatives and municipal electric utilities in North Carolina are obligated to obtain portions of the electricity delivered to their customers from renewable resources (such as wind, solar, hydro and biomass) and/or reduce the energy requirements of their customers by implementating energy-efficiency programs.

#### renewable resources

Fuels used to generate electricity that can be replenished by the environment. Renewable resources include wind, biomass, solar, geothermal, hydro and ocean waves/tides.

## replacement energy

Additional energy to which a Power Agency may be entitled to compensate for the effect of a reduction in the output of generating units in which the agency has an ownership interest.

## reserve capacity

Capacity purchased under contract, and made available to a Power Agency under the contract's terms to help offset any loss of the agency's retained capacity.

#### retail sales

Sales of electricity to residential, commercial, industrial and governmental end users.

## retail wheeling

The process of moving electric power from a generator across one or more transmission and distribution systems for delivery to a retail customer.

## retained capacity

The amount of capacity that a Power Agency has available to it as a result of its ownership interest in a generating plant.

#### revenue bonds

See electric revenue bonds.

## rulemaking

A formal proceeding by FERC or another government agency to set broad rules that will apply in many different future cases coming before that agency.



#### scram

The rapid shutdown of a nuclear reactor, either by the reactor operator or automatically, accomplished by dropping control rods into the core to halt fission.

#### scrubber

A device (technically, a flue gas desulfurization system) that "scrubs" smokestack gases to reduce the amount of sulfur dioxide that is exhausted into the air as the result of burning coal.

#### Senate Bill 3

A North Carolina statute enacted in 2007 under which electric power suppliers in the state are obligated to meet certain standards pertaining to purchases of electricity from renewable resources and the implementation of energy-efficiency programs. (See Renewable Energy and Energy Efficiency Portfolio Standard REPS.)

## **SERC Reliability Corporation (SERC)**

The entity certified by NERC to enforce reliability standards for the bulk power system in the southeast area of the U.S.

## sinking fund

A fund established for money that bond issuers use to buy back some of any given issue annually and retire that part of the debt, so that the entire debt will not have to be repaid at one time. They shrink—or sink—the debt.

## site emergency

An emergency declared by a utility when an incident at a nuclear power plant threatens the release of radioactivity into the immediate area of the plant.

#### smart grid

An evolving concept in which the various components of the electric system (generation, transmission, distribution, customer facilities) are able to communicate with each other and work together, usually instantaneously, to increase reliability, reduce costs, provide greater environmental stewardship, accommodate new technologies (such as electric vehicles) and reduce the threat of hostile acts. For example, using a smart meter enables two-way communication between a customer's appliances and the electric utility so that the customer can see how much electricity is being used in his home, and what it costs, on a real-time basis.

#### solar thermal

The process of concentrating sunlight on a relatively small area to create the high temperatures needed to vaporize water or other fluids to drive a turbine for generation of electric power.

#### Southeastern Power Administration (SEPA)

The government marketing agency for numerous federally owned hydroelectric projects in the southeast area of the United States. Many of the municipal electric utilities in North Carolina receive power from SEPA (pronounced "SEE-pa") facilities.

#### SOX

A term used collectively for various sulfur oxides that are emitted as byproducts of fossil fuel combustion and classified as air pollutants. (See acid rain.)

#### spent fuel

Nuclear fuel that has been depleted to the extent that it can no longer sustain a chain reaction and must, therefore, be replaced.

## spinning reserve

Extra electrical capacity in a generating unit that is held in reserve in case it is needed. It is connected to the bus and is immediately available for use in case of an unanticipated need.

#### spread

The fee the underwriters get for selling a bond issue. Called the underwriter's discount or gross spread, it is the difference between what the investment bankers pay a Power Agency for the bonds it issues and the initial process at which the bonds are reoffered for sale to the public. The spread includes the profits, fees and expenses of the underwriters

#### steam generator

A piece of equipment that generates steam, such as a boiler. In a pressurized water nuclear plant, such as Catawba Nuclear Station, it is a large heat exchanger. Heated water from the reactor flows through thousands of tubes, transferring its heat to the feedwater, which boils and makes steam to turn the turbine. Boiling water nuclear plants, such as Brunswick Steam Electric Plant, do not have steam generators. Steam in this type of plant comes directly from the reactor.

#### step-down transformer

Electricity is transmitted over a transmission system at high voltage because that is more efficient, but when it reaches a delivery point it must be reduced to the lower voltage used by a distribution system. A step-down transformer does that job.

#### step-up transformer

A step-up transformer is used at generating plants to increase the voltage of generated electricity to the higher voltage that will be used to send it over the transmission system.

#### substation

Step-down transformers are located in substations, which provide the link between high-voltage transmission systems and relatively low-voltage distribution systems.

## supplemental capacity

Capacity that a Power Agency purchases to meet the demand of its participants when that demand exceeds the capacity of generation the agency owns.

## support facilities

The facilities of a generating station that are not specifically part of or directly identified with the generating units, such as railroad tracks and coal-handling machinery.

## surplus energy

Energy from the physical or contractual generating resources owned by a Power Agency that is in excess of the agency's load. Surplus energy can be sold to wholesalers in the bulk power market.

#### syndicate

See managing underwriters.

## **System Betterment**

An ElectriCities program introduced in 1986 that emphasizes system efficiency and reliability. Collectively, participating members have saved about \$3.5 million annually after beginning to implement programs in 1988.

## system financing

A type of financing agreement that allows additional bonds to be sold for any additional project approved by a Power Agency's Board of Commissioners. (See project financing.)



#### take and pay

A power sales contract that requires payment to be made only for power actually received.

#### takedown

The selling commission paid to the banks that are part of the bond underwriting group. It is the major component of the spread.

#### take or pay

A power sales contract that requires payment to be made whether or not the power contracted for is received. For projects financed by the issuance of electric revenue bonds, take or pay contracts are standard agreements because the repayment of the debt must be secured if the bonds are to be marketable.

#### therm

A unit of energy equal to 100,000 Btus.

## thermal plant

A generating unit that uses heat as the primary means to generate electricity.

#### Three Mile Island

The nuclear generating facility in Middletown, Pennsylvania, that essentially transformed the regulatory process for nuclear power plant licensing. An accident at the plant in March 1979 destroyed a reactor and spurred interest in nuclear safety. No one was killed or injured during the incident.

#### time-of-use rate

Pricing electricity based on the time of day, month or season. It rewards customers for using electricity during the off-peak period with a low rate and penalizes its use during peak periods with a higher rate.

#### transformer

An electromagnetic device (coils of wire wound around an iron core) used for changing the voltage of alternating-current electricity.

## transmission dependent utility (TDU)

A utility that does not own transmission facilities, but instead uses another utility's transmission system in exchange for paying a wheeling fee. (See wheeling.)

#### transmission facilities

The relatively higher-voltage system (typically, greater than 100,000 volts and up to 750,000 volts) of transformers, power lines, poles and substations that brings electricity from electric generators to the lower-voltage distribution system. The delivery of electricity over long distances is much more efficient and economic when high voltages are used.

#### transmission loss

Electrical energy lost in the process of transporting it over transmission lines. Losses increase with distance, high ambient temperatures and smaller conductor sizes and vice versa.

## trip

A sudden shutdown of a piece of equipment, such as a nuclear reactor. (See scram.)

#### true interest cost (TIC)

The interest cost of a bond issue calculated on the basis of compound interest. This method is based on the present value, or "present worth," of money, which is greater today than it will be tomorrow. True interest cost provides a means of valuing cash payments spread over time, as the payment of bond debt is. True interest cost is slightly higher than net interest cost.

#### turbine

A turbine is a very sophisticated system of propeller-type blades that are turned by the force of water, wind or expanding gases such as steam. The turbine is connected to the electrical generator in a power plant. The turbine-generator combination converts mechanical power, such as the flow of steam, to electrical power.



#### underwriters' discount

See spread.



#### volt

The unit of electrical force or electrical pressure.



## watt

The unit of electric power equal to the rate of energy transfer of one ampere flowing under a force of one volt.

#### wheeling

A service provided when one utility transmits power over its lines on behalf of a second utility. The owner of the lines charges a wheeling fee to provide the service.



## yellow cake

Uranium oxide. On average, one ton of uranium ore will yield about three pounds of yellow cake, which is produced by a mill that crushes, grinds and dissolves the ore and then dries it so that it becomes a powdery, yellow concentrate. Enriched yellow cake can become fuel for a nuclear reactor. (See enriched fuel.)

## ECONOMIC DEVELOPMENT TERMS

#### 501(c)(3)

The Internal Revenue Service code that grants exemption from federal income tax to a nonprofit organization. Donations to such organizations are tax deductible. The organizations described in 501(c)(3) are commonly referred to under the general heading "charitable organizations."

## 501(c)(6)

The Internal Revenue Service code that grants exemption from federal income tax to a business league. Trade associations and professional associations are considered to be business leagues. The business league must be devoted to improving business conditions of one or more lines of business as distinguished from performing particular services for individual persons . No part of its net earnings may inure to the benefit of any private shareholder or individual and it may not be organized for profit or organized to engage in an activity ordinarily carried on for profit.



#### anchor store

The largest store, or one of the largest, in a mall or shopping center.

#### angel investor

An investor who provides equity investment to startup businesses.

#### assessed valuation

The monetary worth of a property for the purposes of taxation. Total assessed valuation denotes the sum of the monetary worth of all taxable properties within a jurisdiction



#### backward and forward linkages

Economic connections among companies. Backward linkages involve purchasing inputs by a given firm from another; forward linkages involve selling the given firm's outputs to another company.

#### bank community development corporation (CDC)

Bank-sponsored community development corporations are a way for banks to contribute to economic

revitalization by investing in local businesses and real estate investment projects that benefit low- and moderate-income groups. A community can establish a bank CDC by working with one or more local banks, the Federal Reserve, the Comptroller, and its respective state financial institutions' regulators. In the case of consortium bank CDCs, where several banks join together, the investors do not have to be just local banks. Bank CDCs can purchase, construct or rehabilitate property.

#### base industry

Also known as "export" or "primary" industries, base industries sell or export their products and services outside the community and bring new money into the community, increasing the total dollars that circulate within the community and that are spent on nonbase industries.

#### benchmarks

Quantifiable measures of economic competitiveness and quality of life that can be collected on a regular basis and are used to measure a region's economic status and progress against comparable regions.

## big-box store

A large establishment that's usually part of a major retail chain such as Target, Kohl's or Home Depot.

#### brick-and-mortar

Retail shop located in a building as opposed to those that are strictly online, door-to-door, in a kiosk or other similar site not housed within a structure.

#### brownfield

Commercial or industrial site that is abandoned or under-utilized and has real or perceived environmental contamination.

#### business assistance center

A one-stop center for streamlining local permitting, licensing and fee payment processes and facilitating decision-making processes.

#### business attraction

Efforts by local economic development organizations to encourage firms from outside their communities to locate headquarters or other operations within their jurisdictions.

#### business climate

The environment of a given community that is relevant to the operation of a business; usually includes tax rates, attitudes of government toward business, and availability.

#### business creation

Economic development strategy that focuses on encouraging forming new companies that are locally based and will remain in the community and grow.

#### business incubator

Entity that nurtures and supports young companies until they become viable, providing them with affordable space, technical and management support, equity and long-term debt financing, and employment. The three basic objectives in creating an incubator are to spur technology-based development, diversify the local economy, and assist in community revitalization.

## business improvement districts (BIDS)

Legally defined entities formed by property and business owners, where an assessment or a tax is levied for capital or operating improvements as a means of supplementing city funding. The district is created by the public law or ordinance and is administered by an entity responsible to the district's members or to the local governing body. Some states authorize nongovernmental, nonprofit corporations. Recent BID programs include economic and social development, transportation, parking management, and converting redeveloped commercial buildings for residential use.

#### business recruitment and attraction

Traditional approach to economic development to entice companies to relocate or set up a new branch plant or operation in a state or locality; often referred to as "smokestack chasing."

#### business retention

Systematic effort designed to keep local companies content at their present locations and includes helping companies cope with changing economic conditions and internal company problems.



## cannibalism

The impact that a new retail location will have on an existing store's sales in a chain corporation.

## capacity building

Developing the ability of a community-based neighborhood organization to effectively design economic development strategies through technical assistance, networks, conferences and workshops.

#### central business district (CBD)

An area with the highest concentration of businesses, including financial institutions, shops, offices, theaters and restaurants

## **Certified and Preferred Lenders Program**

U.S. Small Business Administration program that encourages highly active and expert lenders to provide funds to borrowers.

## **Certified Development Company (CDC)**

The originating and administrating body for SBA 504 loans. The program provides long-term, fixed-rate financing to small businesses to acquire real estate, machinery and equipment for expanding a business or modernizing facilities.

#### clawbacks

The punitive steps taken against firms that break contracts that require local commitments with firms to which they offer incentives. For example, a firm may be required to pay fines or assist in finding a new tenant for its property if it chooses to leave a community.

#### clusters

Collocation of firms in the same or similar industries to foster interaction as a means of strengthening each other and enhancing the community's competitive advantage.

#### Community Development Block Grants (CDBG)

A system of unified block grants under which communities with more than 50,000 people are entitled to receive funding, while other communities may apply for discretionary funding. The purpose of CDBG is to encourage more broadly conceived community development projects and expand housing opportunities for low- and moderate-income persons. The three primary goals of CDBG are to serve low- and moderate-income people, eliminate slums and blight, and address other community development needs that pose a serious and immediate threat to the health and welfare of the community. This program has provided significant support for economic development projects.

## community development corporation (CDC)

Organizations, typically 501(c)(3) nonprofits, that can obtain federal and private support. They are governed by local residents, businesses and community leaders through a board of directors that is in most cases elected from the CDC membership or the community. Most CDCs work only on housing issues, while some perform only economic development services. Those active in economic development provide technical assistance and financing and are committed to serving the impoverished people of America.

## **Community Development Financial Institution (CDFI)**

A specialized financial institution that works in market niches that have not been adequately served by traditional financial institutions. CDFIs provide a wide range of financial products and services, including mortgage financing, commercial loans, financing for community facilities, and financial services needed by low-income households. Some CDFIs also provide technical assistance. To be certified as a CDFI by the CDFI Fund of the Department of the Treasury, an institution must engage in community development, serve a targeted population, provide financing, have community representatives on its board, and cannot be a governmental organization.

## community development venture capital

Capital made available through funds created by local communities for the purpose of making venture capital accessible to entrepreneurs in low-income areas.

#### comparative advantage

The economic advantage gained by one area over another due to the fact that it can produce a particular product more efficiently. More efficient production of one good means there is a higher opportunity cost to produce another. This is the concept that drives trade between economies. Inter-regional and international trade exploits the comparative advantages of economies.

#### Consolidated Plan (ConPlan)

Combination of all of the planning, application, and performance requirements previously required separately for Community Development Block Grants (CDBG), HOME, Emergency Shelter Grants (ESG), Housing Opportunities for People with AIDS (HOPWA), and programs, such as HOME, that require a Comprehensive Housing Affordability Strategy (CHAS).

#### corporate welfare

Government subsidies targeted to large corporations.

## cost-benefit analysis

A method for evaluating the profitability of alternative uses of resources.

## cost-effective analysis

Compares alternative projects or plans to determine the least costly way to achieve desired goals. Usually, some index or point system is developed to measure the effectiveness of the proposal in meeting the goals and objectives.

#### customized training

Learning designed to meet the needs of a given employer; used by local governments to attract or retain major employers.



#### demand-side theory of development

Economic development that focuses on discovering, expanding, and creating new markets; forming new businesses; nurturing indigenous re-sources; and involving government in the economy.



#### eco-industrial park

Industrial park designed to encourage business interaction in ways that foster reusing waste streams, recycling inputs and other mechanisms.

#### economic base

A method of classifying all productive activity into two categories: basic industries that produce and sell goods that bring in new income from outside the area and service industries that produce and sell goods that simply circulate existing income in the area.

#### economic base analysis

A comprehensive study of a locality's economy, focusing on the importance of exports. It should include an economic history, data on existing industries, and trends and forecasts of growth in wages and employment.

#### **Economic Development Administration (EDA)**

Created by the Public Works and Economic Act of 1965 as a part of the Commerce Department, the EDA's main goals are to alleviate unemployment and diversify the economy, as well as to assist urban areas with planning and emergency public works programs.

#### econometric modeling

A qualitative method for analyzing the impact of a proposed action on the economy. A model permits testing the effects of an anticipated or hypothetical change.

#### economies of scale

The phenomenon of production where the average cost of production declines as more of the product is produced.

#### edge city

A newly emerged city that serves as a work and shopping center, with a large amount of office and retail space.

#### eminent domain

The authority to "take" private property upon paying a fair price for the property and relocating the tenants. The most frequent use of this authority is the act of "condemnation."

#### **Empowerment Zones/Enterprise Communities (EZ/EC) Initiative**

Established in 1994 and administered by the Department of Housing and Urban Development and the Department of Agriculture, the federal EZ/EC tools include not only business tax incentives but also transportation to work or school, drug and alcohol rehabilitation, and other local priorities. The program creates incentives for localities to develop their own approaches to alleviate poverty. All federally designated zones are areas of pervasive poverty, unemployment and general distress. Each designated city receives a mix of grants and tax-exempt bonding, while employers in the EZ/EC receive tax credits for new hires and accelerated depreciation credits.

#### enterprise development

Assistance to entrepreneurs in support of creating, growing and sustaining their businesses.

#### enterprise zones

Designated geographic areas that are eligible for special treatment and incentives to attract private investment. State guidelines define the size of a zone and the minimum level of economic distress to qualify as an enterprise zone. States can also limit the number and type of enterprise zones. These restrictions are generally set out in the state enterprise zone program.

#### entitlement community

A community is eligible to receive annual CDBG funds that it can use to revitalize neighborhoods, expand affordable housing and economic opportunities, and/or improve community facilities and services, principally to benefit low- and moderate-income persons. Eligible grantees include local governments with 50,000 or more residents, other local governments designated as central cities of metropolitan areas, and urban counties with populations of at least 200,000 (excluding the population of entitled cities). The state CDBG program offers funds to the state that they then allocate among localities that do not qualify as entitlement communities.

#### entrepreneurial training

Programs that provide guidance and instruction on business basics, such as accounting and financing, to ensure that new businesses improve their chance of success. The most common instructional methods include classroom training, workshops, speakers, peer groups and one-on-one counseling, lectures, internships, and self-study.

## equity financing

Investments are typically secured in this type of financial support in return for partial ownership of an enterprise; three mechanisms can be used for receiving an equity position in a firm: common stock, preferred stock and convertible debt.

## e-tailing

Internet retailing.



#### first wave

Strategic paradigm of economic development that focuses on business attraction tactics.

#### fiscal impacts

Direct and indirect costs incurred and revenues received by local governments resulting from land use and other types of decisions.

#### franchise

The right under which a franchisee person or company may market a product or service, as granted by the franchisor (the proprietary owner).



#### green retailing

Environmentally friendly practices of retailers, such as using recyclable packaging or reusable shopping bags.

## gap financing

A loan required by a developer to bridge the gap, i.e., to make up a deficiency, between the amount of mortgage loan due upon project completion and the expenses incurred during construction (financing that covers the difference between what a project can support and the cost of development or purchase).

#### general obligation (G.O.) bonds

Traditional form of borrowing for state and local government, secured by full faith and credit of jurisdiction.

#### limited tax G.O. bonds

Tax-exempt bonds secured by the revenue from applying a fixed rate against taxable property. Not all states permit limited tax G.O.s, but in those that do, such bond issuance does not require voter approval.

#### unlimited tax G.O. bonds

Tax-exempt bonds secured through taxes that are levied without rate or amount limitations in order to repay the principal and interest of the bond. They are typically used to finance public works infrastructure and land acquisition for blight elimination.



#### impact fees

Fees required to cover costs of improving and/or building infrastructure needed as a result of the expected impact of development projects on those facilities; often required by localities for the approval of development projects.

#### incentives

Benefits offered to firms as part of an industrial attraction strategy. Incentives include tax abatements and credits, low-interest loans, infrastructure improvements, job training and land grants.

#### incubator-without-walls

Form of business incubation that does not take place in a single building, but instead comprises a network of entrepreneurs and entrepreneurship service providers throughout a community or region.

#### industrial development bond (IDB)

Bonds used to finance acquisition, construction, expansion, or renovation of manufacturing facilities and purchasing machinery and equipment depending upon state law. IDB financing is subject to state and local laws and federal income tax laws and regulations if the interest on the bonds is expected to be exempt from federal income taxation.

#### industrial revenue bonds

Bonds that provide lower-cost financing for real property improvements or for purchasing or constructing buildings, facilities or equipment.

#### industry clusters

Groups of similar and related firms in a defined geographic area that share common markets, technologies and worker skill needs, and that are often linked by buyer-seller relationships.

#### infrastructure banks

Public-targeted lending facilities, financed through a combination of bond issues, government funds and external donor support. They mobilize domestic funds and create an attractive vehicle for donor funding.

#### investor networks

A tool for matching up potential investors with startup firms needing capital.

#### **Internal Rate of Return (IRR)**

Interest rate at which the net present value of all the cash flows (both positive and negative) from a project or investment equal zero; used to evaluate the attractiveness of a project or investment.



#### jobs-housing imbalance

Spatial mismatch between where people live and where they work.

#### just-in-time inventorying

Cost-saving approach by a manufacturer that involves maintaining no inventory of product inputs on-site. Instead, the supplier delivers the inputs when they are needed in the production process.



#### land banking

A program that preserves industrial space for a city. A city or local development authority acquires and holds land until a developer steps forward with a proposal for its use as an industrial site.

## labor-force theory of development

Explanation of development that stresses the importance of an educated, skilled and dependable workforce for attracting and growing businesses and accepts the concept that the public sector has a responsibility to fit human resources to the needs of the business community.

#### land write-down

Providing land to developers at a price that is below public sector expenses for improvements.

#### loan pooling

Two or more lenders contributing to a fund from which loans are made to applicants; publicly chartered, privately funded corporations can be established to pool resources.

## location theory of development

Explanation of economic development that emphasizes factors such as transportation, access to raw materials and labor, taxes, business climate, and quality of life as they relate to industrial location.

#### long-wave theory of development

Explanation of economic development that contends that bursts of innovation lead to economic growth



#### mezzanine capital

Funds or goods used to bridge the gap in resources from one stage of business to another. (See gap financing.)

#### microenterprise

A "smaller-than-small" business operated by a person on a full- or part-time basis, usually out of a home. Includes carpenters, daycare providers and caterers.

#### microloans

Very small, short-term unsecured loans given to people without credit history and/or the collateral necessary to obtain a conventional loan. These are available from either local lenders or the SBA's 7(m) Microloan Program.

#### Minority Businesses Development Agency (MBDA)

An agency within the U.S. Department of Commerce that provides assistance to socially or economically disadvantaged individuals who own or want to start a business. Established in 1969, MBDA provides funding for Minority Business Development Centers, Native American Business Development Centers, Business Resource Centers, and Minority Business Opportunity Committees.

#### moderate income

According to HUD's guidelines, households whose incomes are between 81 percent and 95 percent of an area's median income with adjustments for smaller or larger families are considered to have moderate income. Different programs may set different percentages.

## multiplier

A quantitative estimate of a project's impact (in dollars, jobs created, demand).

## multiplier effect

The process of dollar and job generation as a result of a new or migrating business or project, or of a local business expanding production (to exports). The multiplier effect accounts for new local income generated by local spending that came from outside a community.

## N

#### NIMBY

An acronym for "not in my back yard," used to describe the attitude of people or entities who do not want any electric industry facilities (power plants, transmission lines, waste repositories, etc.) built on, near or within sight of their property or town.

#### **North American Development Bank**

Founded under the auspices of the North American Free Trade Agreement (NAFTA), NADB is a "bilaterally funded, international organization, in which Mexico and the United States participate as equal partners." Its purpose is to finance environmental infrastructure projects. All financed environmental projects must be certified by the Border Environment Cooperation Commission, related to potable water supply, wastewater treatment or municipal solid waste management, and located in the border region.

#### North American Industry Classification System (NAICS)

The industrial classification code system used for categorizing industrial establishments. Beginning in 1997, NAICS replaced the Standard Industrial Classification (SIC) as the system for classifying firms in the United States, Canada and Mexico.

## neighborhood shopping center

A planned shopping facility with the largest store being a supermarket and/or a drugstore, serves 3,000 to 50,000 people within a 15-minute drive time.



#### off-site improvements

Access roads, sidewalks and curbs, sewers, and utility lines that are off the land being developed or the lots being sold, yet add value to the entire development.

#### omnichannel retailing

Establishing a presence on several platforms, such as brick-and-mortar, mobile, and online, and enabling customers to transact, interact and engage across those channels simultaneously or interchangeably.

#### one-stop business service centers

Facilities where business persons can go to obtain the licenses and permits needed to start up, operate and expand their facilities. These centers improve the local business environment while reducing the number of separate agencies and offices a business must apply to for various licenses and permits, saving public and private time and financial resources.

#### opportunity cost

The revenue forgone by choosing one use of money and resources over another. The opportunity cost of investing in the stock market is the interest that the money could have earned while sitting in the bank.

#### **Overall Economic Development Plan (OEDP)**

A plan developed at the city, county or EDD level, as required by EDA, to identify an area's problems and opportunities for economic development, define goals and objectives, and list infrastructure and other projects needed to achieve those goals.



#### pop-up store

Short-term shops or sales spaces that come and go within a given period.

#### power center

Shopping site with up to a half-dozen or so major stores and a mix of smaller stores or several complementary stores specializing in a product category.

#### public-private partnership

A contractual arrangement between a public agency (federal, state or local) and a private sector entity. Through this agreement, the skills and assets of each sector (public and private) are shared in delivering a service or facility for the use of the general public.



#### regional shopping center

A large shopping facility appealing to a geographically dispersed market with at least one or two full-sized department stores and 50 to 150 or more smaller retailers. The market for this center is 100,000-plus people who live or work no more than a 30-minute drive away.

#### retail leakage

Occurs when local people spend more for goods than local businesses actually acquire. It indicates an unsatisfied demand within the area and signals a locality to provide certain types of businesses.

#### return on investment (ROI)

Usually expressed as a percentage and typically used for personal financial decisions, to compare a company's profitability, or to compare the efficiency of different investments. The return on investment formula is:  $ROI = (net profit / cost of investment) \times 100$ .

#### revenue bond

Bond backed by anticipated revenue stream from a specific project.

#### **Revolving Loan Fund (RLF)**

A pool of public and private sector funds in which the money is recycled to make successive loans to businesses. Loans made by an RLF are repaid with interest and the payments are returned to replenish the lending pool so new loans can be made. The funds are thus recycled and the RLF grows as each generation of borrowers adds to the pool.



#### seed capital

Equity money supplied to help a company get off the ground. It is almost always supplied by an entrepreneur and his/her family, friends and relatives, and it's used to help attract other investment.

#### second wave

Strategic paradigm of economic development that focuses on retaining firms already in the community and on creating new businesses.

#### secondary financing

A loan secured by a second mortgage on a property, sometimes used to refer to any financing techniques other than equity and first-mortgage debt.

## shift-share analysis

A method used to examine a local area's basic industries in terms of their growth and decline relative to national or regional trends.

#### site location assistance

Help provided by local governments that enables new, expanding, and relocating businesses to locate a site that fits their facility's needs. The assistance services include providing information on sites and organizing visitation programs.

#### Small Business Administration (SBA)

Founded in 1953, SBA's mission is to "aid, counsel, assist and protect, insofar as is possible, the interests of small business concerns." Its charter also mandates that the SBA ensure small businesses a "fair proportion" of government contracts and sales of surplus property. Since its inception, the SBA has delivered more than 13 million loans, loan guarantees, contracts, and other forms of assistance to small businesses.

#### Small Business Development Center (SBDC)

Facility that provides business development, information and assistance in one location; administered by the U.S. Small Business Administration.

#### **Small Business Investment Company (SBIC)**

Privately owned and managed for-profit investment firms that use their own capital, plus funds borrowed at favorable rates with an SBA guarantee, to make venture capital investments in small businesses.

#### smart growth

The efficient use of all available assets. According to the American Planning Association, smart growth involves efficient land use, full use of urban services, mixed use, mass transportation options, and detailed human-scaled design.

#### smokestack chasing

Pursuit of traditional manufacturing businesses by local economic development organizations.

#### social capital

Linkages between and among business development service providers and the companies they assist; these linkages can be internal (within a given-service provider organization) and external (between an organization and its clients and external service providers and businesses).

#### special assessment districts

Areas designated by a taxing authority to be assessed for tax purposes on a scale that differs from the rest of the taxed jurisdiction. Property in these districts may be taxed differently altogether. They may be required to pay special taxes more reflective of the greater benefit earned by some public expenditure in the district.

#### special assessment funds

Costs of a project that benefit a specific group of properties may be assessed to those individuals and accounted for in the special assessment fund.

#### special improvement districts

Mechanisms where local businesses and/or residents agree to voluntarily pay an additional tax to support improvements or services so local governments can finance and implement improvements within a specific and limited area (similar to business improvement districts).

#### startup

Company in the first stage of the evolution of a business.

## startup capital

Funds that help nascent enterprises acquire space, equipment, supplies and other inputs needed to launch a business

## supply-side theory of development

Explanation of economic development that focuses on reducing costs of production to lure capital to a new location. Typical strategies include tax abatements, reductions, and exemptions; guaranteed and direct loans; and reduced regulation.

#### sustainable development

Development that does not destroy or eventually deplete a location's natural resources. Sustainable development helps ensure a better, healthier living environment and contributes to an area's quality of life—one of the main goals of economic development.

#### **SWOT** analysis

A tool used in the economic development planning process to assess a community's strengths and weaknesses (factors from within a community that can be changed) as well as its opportunities and threats (factors from outside that cannot be changed).



#### tax abatement

Exemption or reduction of local taxes of a project for a specific period of time. Contracts between a government entity and a real estate holder that stipulate that some share of assessed value will not be taxed for an agreed time period. A typical goal of tax abatement is to encourage economic development.

#### tax credit

Money directly subtracted from a tax bill after a tax liability has been incurred.

#### tax deferral

Policy that permits individuals whose property values have risen dramatically through no fault of their own to pay taxes on the basis of old values.

#### tax-exempt bond

Obligation that does not require recipients of interest payments to pay taxes on the interest revenue. Although revenue bonds may be a form of tax-exempt bonds, not all revenue bonds qualify for a tax exemption (e.g., stadium projects, parking facilities, and nongovernment office buildings lost their tax-exempt status in 1986).

#### tax exemption

Policy that reduces the base from which property is assessed. It's accomplished by subtracting a given amount of money from the assessed market rate. Tax exemptions are often granted to individuals, institutions or types of property.

#### tax incentives

Using various tax relief measures, such as tax exemptions, tax credits or tax abatements, to recruit and attract businesses to a community or to help local businesses expand.

#### tax increment financing (TIF)

Tool of economic development in which taxes that can be traced to a specific development are used to repay bonds that were issued to finance that development. When bonds are fully paid, the jurisdiction can begin to receive the additional tax revenue produced by the development.

#### tax stabilization agreement

Agreement to not raise taxes significantly; used to assure potential investors of a stable tax environment.

#### technical assistance

Includes help with preparing grant applications, training staff, applying for loans and marketing the product. It may also include assisting a small business to improve its product or manufacturing process. Technical assistance is generally aimed at providing specific services that a small business typically cannot afford, or general business planning.

#### third wave

Strategic paradigm of economic development that aims to create a local or regional environment that is supportive of growth and development.

#### trade area

Geographic area from which a community generates the majority of its customers. This often is the geographic area that represents 75 percent of current customers.



#### under-employed

Includes all persons whose skills, education or training qualify them for a higher skilled or better-paying job than they presently hold. It also includes persons only able to find part-time rather than full-time work in their fields.

#### umbrella bonds

Low-cost financing with lower interest rates for projects too small to qualify for normal revenue bond programs. Bond proceeds are used as loans for acquisition of land, building, machinery and equipment. The umbrella is a pool of small bonds of \$1 million or less packaged into a larger bond and issued by the state or local economic development agency.

#### unemployed

As defined by the U.S. Department of Labor, the term includes all civilians who were not employed, but were available and actively seeking work within the past four weeks, were waiting to be called back to a job from which they had been laid off, or were waiting to report to a new job scheduled to begin within 30 days.



#### value-added

Revenue created by processing resources; the amount of revenue is greater because those resources have been processed.

#### venture capital

An investment made where there is a possibility of very substantial returns on the investment, as much as 40 percent, within a short period. It is usually invested in dynamic, growing and developing enterprises, not in startups.



#### **Workforce Investment Act**

Workforce Investment Act of 1998 is the federal government's effort to adapt a workforce training system to current economic conditions. WIA impacts economic development because it decentralizes decision-making to the local level, allows local businesses to determine skill needs, adapts training to local growth patterns, promotes inclusion of economic development principles in plans, and requires the state to submit economic development plans with the WIA implementation plan.

#### wearable technology

Gadgets, such as smartwatches, that people wear that often sync to an app or other cloud-based software.

## Index - Public Power

## A

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ampere

Atomic Energy Commission (AEC)

Atomic Safety and Licensing Board Panel (ASLBP) availability В

Balance of plant (BOP) base load plant basis point bearer bonds billing determinants billing period Board of Commissioners (BOC) Board of Directors (BOD) boiler boiling water reactor (BWR) bond bond anticipation notes (BANs) bond resolution British Thermal Notes (Btu) Bulk Power Marketing (BPM) bus (or bus bar)

C

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(DSM)
Department of Energy
(DOE)

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electric revenue bonds
electromagnetic fields
(EMFs)
emergency core cooling
system
emergency feedwater
pumps
energy charge
enriched fuel
entitlement
Environmental Protection
Agency (EPA)

Electric Power Research Institute (EPRI)

## F

Federal Energy Regulatory Commission (FERC) forced outage rate (FOR) fossil fuel fuel assembly fuel clause fuel expense fuel pool fuel rod

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general emergency
generation and
transmission (G&T)
generation mix
generator
geothermal energy
gigawatt
green energy
greenhouse effect
greenhouse gases
grid

## н

hazardous waste high-pressure injection hydroelectric plant

## Ι

independent power producer (IPP)
independent system operator (ISO)
infrared scanning
Institute of Nuclear Power Operations (INPO)
interchange agreement interconnection agreement interruptible power investor-owned utilities (IOUs)

## J

joint action agency

## K

kilovolt-amperes (kVa) kilowatt (kW) kilowatt-hour (kWh)

## L

lead manager

leased facilities fee
line loss
load
load curve
load factor
load forecast
load management program
load-side generation

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Commission (NRC)

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rate stabilization fund
rating agencies
reactor coolant system
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registered bonds
refueling outage (RFO)

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reload fuel
Renewable Energy and
Energy Efficiency
Portfolio Standard
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replacement energy
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retail sales
retail wheeling
retained capacity
revenue bonds
rulemaking

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Corporation (SERC)
sinking fund
site emergency
smart grid
solar thermal
Southeastern Power
Administration (SEPA)
SOX

spent fuel
spinning reserve
spread
steam generator
step-down transformer
step-up transformer
substation
supplemental capacity
support facilities
surplus energy
syndicate
System Betterment
system financing

## Т

take and pay
takedown
take or pay
therm
thermal plant
Three Mile Island
time-of-use rate
transformer
transmission dependent
utility (TDU)
transmission facilities
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trip true interest cost (TIC) turbine

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## V

volt

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brownfield
business assistance center
business attraction
business climate
business creation
business incubator

business improvement districts (BIDS)
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business retention

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community development

venture capital

comparative advantage Consolidated Plan (ConPlan) corporate welfare cost-benefit analysis cost-effective analysis customized training

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demand-side theory of development

## Ε

eco-industrial park
economic base
economic base analysis
Economic Development
Administration (EDA)
econometric modeling
economies of scale
edge city
eminent domain
emergency feedwater
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energy charge

Empowerment Zones/ Enterprise Communities (EZ/EC) Initiative enterprise development enterprise zones entitlement community entrepreneurial training equity financing e-tailing

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unlimited tax G.O. bonds

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development
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loan pooling
location theory of
development
long-wave theory of
development

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Minority Businesses
Development Agency
(MBDA)
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multiplier
multiplier effect

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NIMBY
North American
Development Bank
North American Industry
Classification System
(NAICS)
neighborhood shopping
center

off-site improvements omnichannel retailing one-stop business service centers opportunity cost Overall Economic Development Plan (OEDP)

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pop-up store power center public-private partnership

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## Т

tax abatement
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tax deferral
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tax exemption
tax incentives
tax increment financing (TIF)
tax stabilization agreement
technical assistance
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trade area

## U

under-employed umbrella bonds unemployed

## V

value-added venture capital



Workforce Investment Act wearable technology



# Notes

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