* **countries**: Records details about different countries around the world.
  + country\_id: int, auto\_increment, unique, not NULL, PK. The unique identifier for each country.
  + country\_name: varchar, not NULL. The official name of the country.
  + global\_region: varchar, not NULL. The geographical region in which the country is located.
  + population: bigint, not NULL. The total population of the country.
  + gdp: decimal, not NULL. The Gross Domestic Product of the country.
  + **Relationships**: A 1:M relationship with both the consumers and providers entities. The country\_id serves as a foreign key in these entities.
* **energy\_types**: Stores data about different forms of energy being used (solar, wind, coal, nuclear, etc.).
  + energytype\_id: int, auto\_increment, unique, not NULL, PK. A unique identifier for each type of energy.
  + energy\_type: varchar, not NULL. The name of the type of energy.
  + description: text, not NULL. A brief description of the energy type.
  + sust\_rating: varchar, not NULL. Rating of energy type according to authoritative sustainability standards.
  + **Relationships**: A 1:M relationship with the providers entity, and a M:N relationship with the consumers entity. The energytype\_id serves as a foreign key in these entities.
* **consumers**: Records data about energy consumers, represented as local municipalities.
  + consumer\_id: int, auto\_increment, unique, not NULL, PK. A unique identifier for each municipality.
  + municipality: varchar, not NULL. The name of the municipality.
  + population: bigint, not NULL. The population of the city or town.
  + country\_id: int, FK, not NULL. The identifier for the country in which the municipality is located.
  + region: varchar, not NULL. The region in which the municipality is located.
  + annual\_consumption: decimal, not NULL. The total energy consumed by the municipality each year.
  + annual\_spending: decimal, not NULL. The total money spent on energy by the municipality each year.
  + total\_providers: int, not NULL. The total number of energy providers serving the municipality.
  + **Relationships**: A M:N relationship with the providers entity, and M:N relationship with the energy\_types entity, both through intersection tables. The consumer\_id serves as a foreign key in the provided\_energy and consumed\_energy intersection tables.
* **providers**: Contains information about energy providers.
  + provider\_id: int, auto\_increment, unique, not NULL, PK. A unique identifier for each provider.
  + provider\_name: varchar, not NULL. The name of the provider.
  + org\_type: varchar, not NULL. The type of the provider (public, private, cooperative, etc.).
  + country\_id: int, FK, not NULL. The identifier for the country in which the provider is located.
  + energytype\_id: int, FK, not NULL. The identifier for the type(s) of energy provided.
  + capacity: decimal, not NULL. The total capacity of the provider to produce energy.
  + **Relationships**: A M:N relationship with the consumers entity through an intersection table, and a M:1 relationship with the energy\_types table. The provider\_id serves as a foreign key in the provided\_energy intersection table. Country\_id and energytype\_id are foreign keys to the countries and energy\_types entities, respectively.
* **provided\_energy** (Intersection Table): Records the provision of energy from Providers to Consumers.
  + provider\_id: int, FK, not NULL. The identifier for the Provider supplying the energy.
  + consumer\_id: int, FK, not NULL. The identifier for the municipality consuming the energy.
  + annual\_amount: decimal, not NULL. The amount of energy provided.
  + annual\_cost: decimal, not NULL. The total annual cost of the provision.
  + **Relationships**: Implements the M:N relationship between the providers and consumers entities. Both provider\_id and consumer\_id are foreign keys reference the providers and consumers entities, respectively.
* **consumed\_energy** (Intersection Table): Records the consumption of an energy type between consumers and energy\_types entities.
  + consumer\_id: int, FK, not NULL. The identifier for the municipality consuming the energy.
  + energytype\_id: int, FK, not NULL. The identifier for energy type consumed.
  + annual\_amount: decimal, not NULL. The amount of energy consumed.
  + annual\_cost: decimal, not NULL. The total annual cost of the consumption.
  + **Relationships**: Implements the M:N relationship between the consumers and energy\_types tables. Consumer\_id and energytype\_id point to the consumers and energy\_types entities, respectively.