CREATE TABLE Energy\_Producers (

ProducerID INT PRIMARY KEY AUTO\_INCREMENT,

Name VARCHAR(100),

Type\_of\_Energy VARCHAR(50),

Location VARCHAR(100),

Capacity\_MW DECIMAL(10, 2),

Contact\_Info VARCHAR(150)

);

CREATE TABLE Energy\_Consumers (

ConsumerID INT PRIMARY KEY AUTO\_INCREMENT,

Name VARCHAR(100),

Type VARCHAR(50), -- Residential, Commercial, Industrial

Location VARCHAR(100),

Energy\_Usage\_kWh DECIMAL(10, 2),

Billing\_Info VARCHAR(150)

);

CREATE TABLE Energy\_Sources (

SourceID INT PRIMARY KEY AUTO\_INCREMENT,

Type\_of\_Energy VARCHAR(50),

Availability\_Hours INT, -- Hours per year

Environmental\_Impact\_Score DECIMAL(5, 2),

Cost\_Per\_Unit DECIMAL(10, 2)

);

CREATE TABLE Energy\_Distribution\_Networks (

NetworkID INT PRIMARY KEY AUTO\_INCREMENT,

Name VARCHAR(100),

Coverage\_Area VARCHAR(100),

Type VARCHAR(50), -- Grid, Off-Grid

Capacity\_MW DECIMAL(10, 2),

Maintenance\_Schedule VARCHAR(150),

Efficiency\_Rating DECIMAL(5, 2)

);

CREATE TABLE Energy\_Storage\_Facilities (

FacilityID INT PRIMARY KEY AUTO\_INCREMENT,

Type VARCHAR(50), -- Battery, Pumped Hydro, etc.

Capacity\_MWh DECIMAL(10, 2),

Location VARCHAR(100),

Operational\_Status VARCHAR(50),

Efficiency DECIMAL(5, 2)

);

CREATE TABLE Government\_Policies\_Regulations (

PolicyID INT PRIMARY KEY AUTO\_INCREMENT,

Name VARCHAR(100),

Type VARCHAR(50), -- Subsidy, Tax, Regulation

Effective\_Date DATE,

Affected\_Regions VARCHAR(150),

Impact\_on\_Affordability\_Clean\_Energy VARCHAR(150)

);

CREATE TABLE Renewable\_Energy\_Projects (

ProjectID INT PRIMARY KEY AUTO\_INCREMENT,

Name VARCHAR(100),

Type VARCHAR(50), -- Solar Farm, Wind Park, etc.

Location VARCHAR(100),

Capacity\_MW DECIMAL(10, 2),

Start\_Date DATE,

Status VARCHAR(50), -- Planned, Ongoing, Completed

Funding\_Sources VARCHAR(150)

);

CREATE TABLE Energy\_Prices (

PriceID INT PRIMARY KEY AUTO\_INCREMENT,

Energy\_Type VARCHAR(50),

Region VARCHAR(100),

Price\_Per\_Unit DECIMAL(10, 2), -- Price per kWh

Date DATE,

Price\_Trend VARCHAR(100),

Subsidy\_Info VARCHAR(150)

);

CREATE TABLE Environmental\_Impact\_Assessments (

AssessmentID INT PRIMARY KEY AUTO\_INCREMENT,

Project\_Facility\_ID INT, -- Reference to a project or facility

Date DATE,

Type\_of\_Impact VARCHAR(100), -- Emissions, Land Use, Water Use

Mitigation\_Measures VARCHAR(150),

Compliance\_Status VARCHAR(50),

FOREIGN KEY (Project\_Facility\_ID) REFERENCES Renewable\_Energy\_Projects(ProjectID)

);

CREATE TABLE Energy\_Efficiency\_Programs (

ProgramID INT PRIMARY KEY AUTO\_INCREMENT,

Name VARCHAR(100),

Target\_Audience VARCHAR(50), -- Residential, Commercial, Industrial

Description TEXT,

Start\_Date DATE,

Success\_Metrics VARCHAR(150) -- Energy Savings, Participation Rate, etc.

);