

# Modeling Energy Demand *in LEAP*

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This Project is funded by the European Union



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# Energy demand

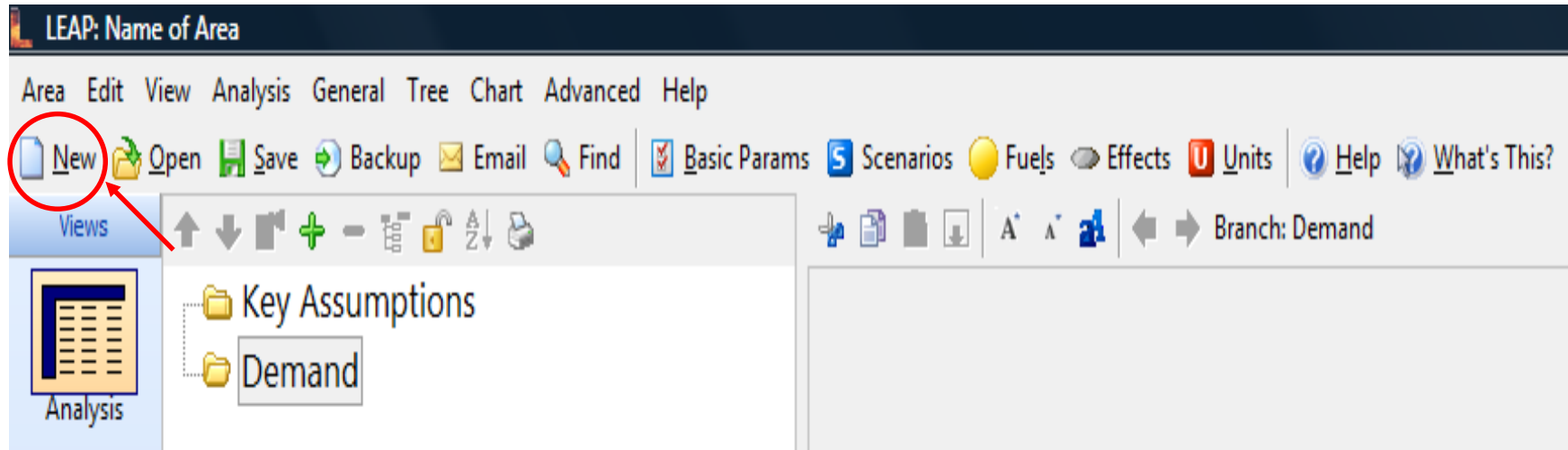
- All energy delivered to final consumer\*
  - Residential
  - Industrial
  - Services
  - Transport
  - Agricultural
  - Fishing
  - Non-specified
  - Non Energy use

\* Eurostat definition



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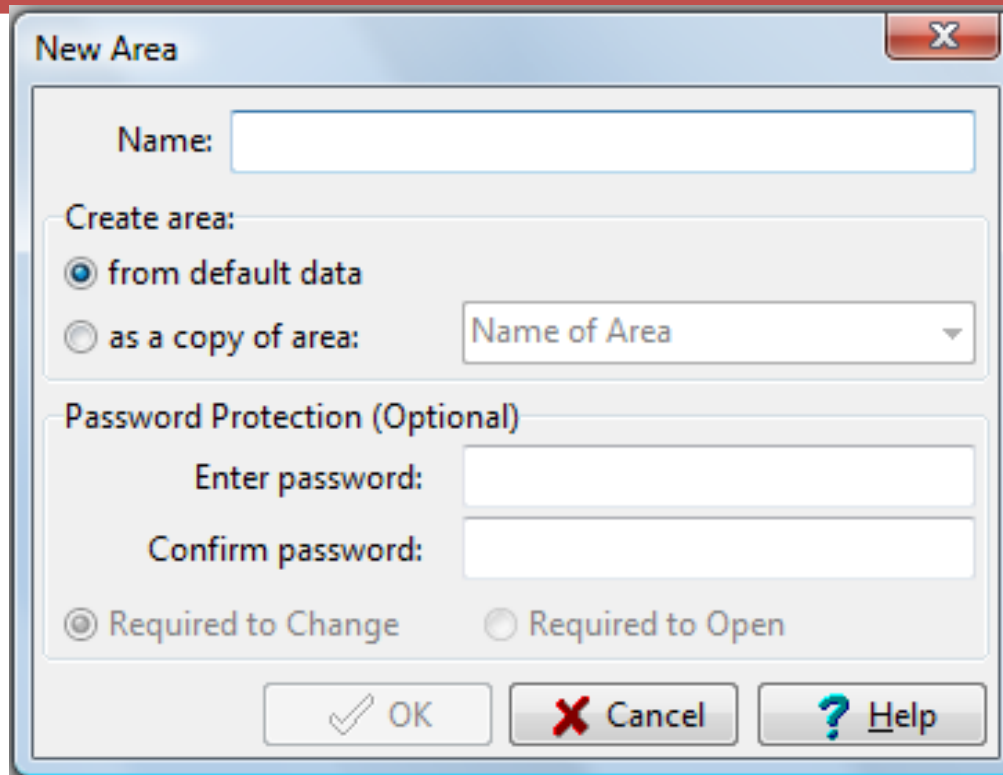
# Area creation (1/2)



- Go to the main toolbar
- Click on button “New”



# Area creation (2/2)



New Area

Name:

Create area:

☒ from default data

☐ as a copy of area:

Password Protection (Optional)

Enter password:

Confirm password:

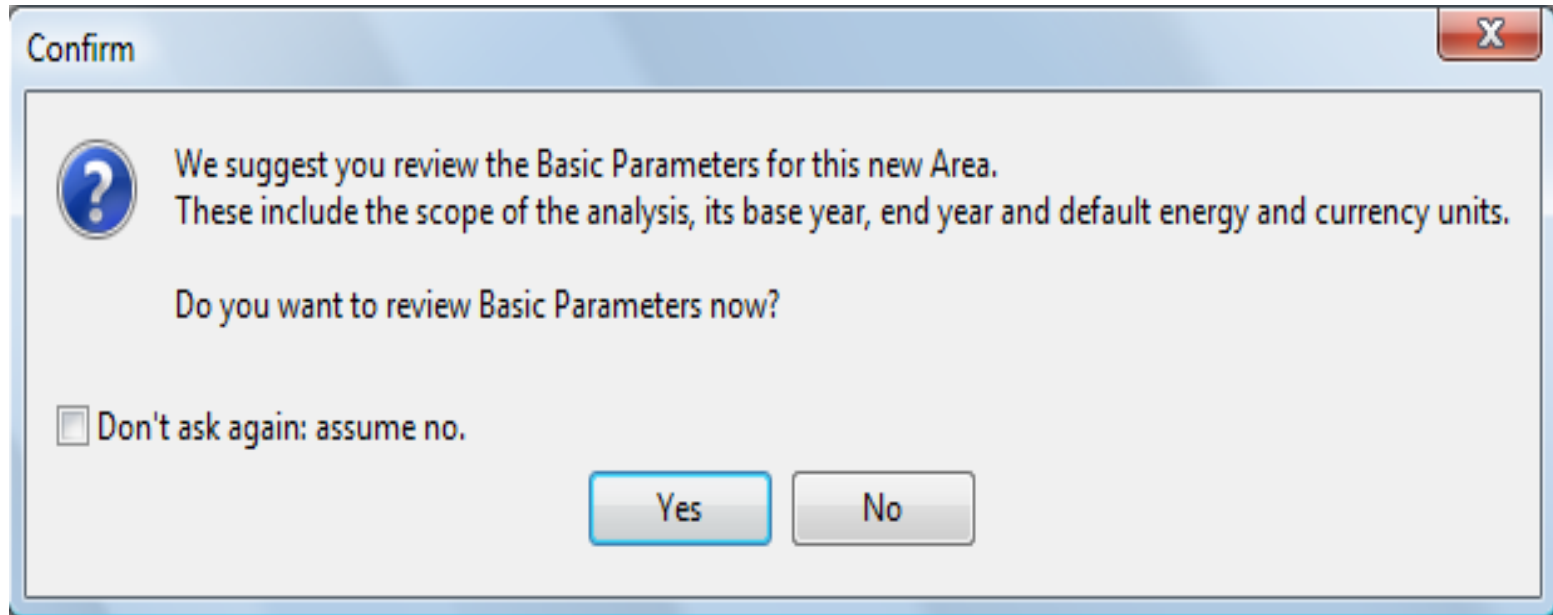
☒ Required to Change ☐ Required to Open

- Name your New Area
- Set security password



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# Basic parameters (1/3)



# Basic parameters (2/3)

Basic Parameters

Scope & Scale

Years

Default Units

Calculations

Optimization

Stocks

Internet

Charts

Folders

Security

Area

Name:

Name of Area

Description:

Scope

☐ Transformation & Resources

☐ Statistical Differences & Stock Changes

☐ Costs

☐ Energy Sector Environment Loadings

☐ Non-Energy Sector Environment Loadings

☐ Indicators

☒ [Edit List of Result Variables to Save](#)

Scale

☐ Global

☐ Multi-national

☒ National

☐ Sub-national

Country

User Information: from COMMENT

Property	Value
Organization	KEPA
Organization Type	Academic Organization
City	Athens
Country	Greece
Email	promitheas@kepa.uo...
Web	http://www.kepa.uoa....
License Expires:	10/21/2016

[Visit COMMENT to edit your user profile](#)

☒ Close

☐ Help



# Basic parameters (3/3)

- Define basic settings of analysis
  - Scope and scale
  - Base Year and End Year
  - Default units




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# Tree branch / Properties

- Tree toolbar 
  - **Add** (+), **Delete** (-) and **Properties** (folder icon) buttons
- Type of branches
  - **Category** (folder icon)
  - **Category with energy intensity** (green folder icon)
  - **Technology with energy intensity** (gear icon)
  - **Technology with total energy** (red gear icon)
  - **Key Assumption** (blue K icon)





# Add Key Assumption branch

**Branch Properties**



Name:

Branch Type:

 ☐ Category

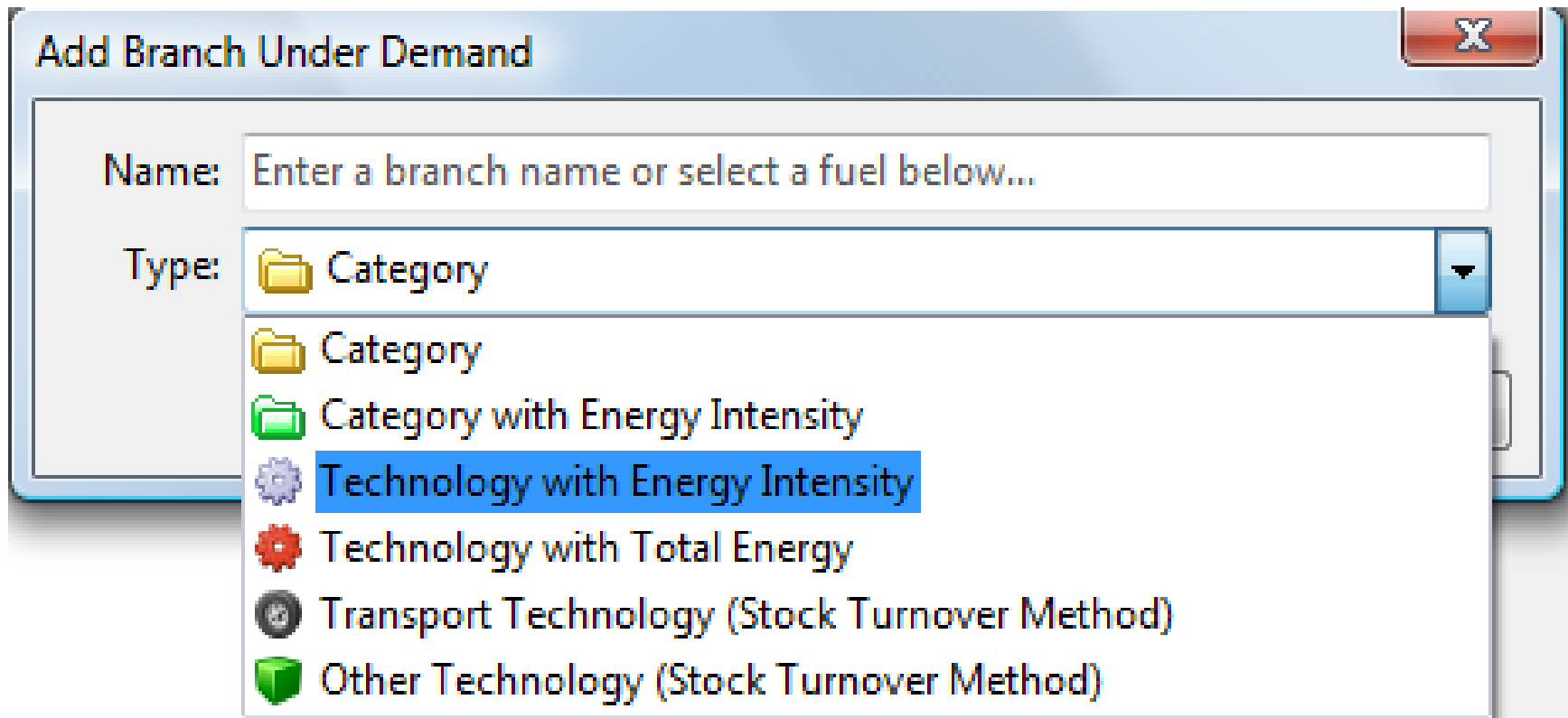
 ☒ Key Assumption

Units:

 OK  Cancel










# Add Demand branch



**Add Branch Under Demand**

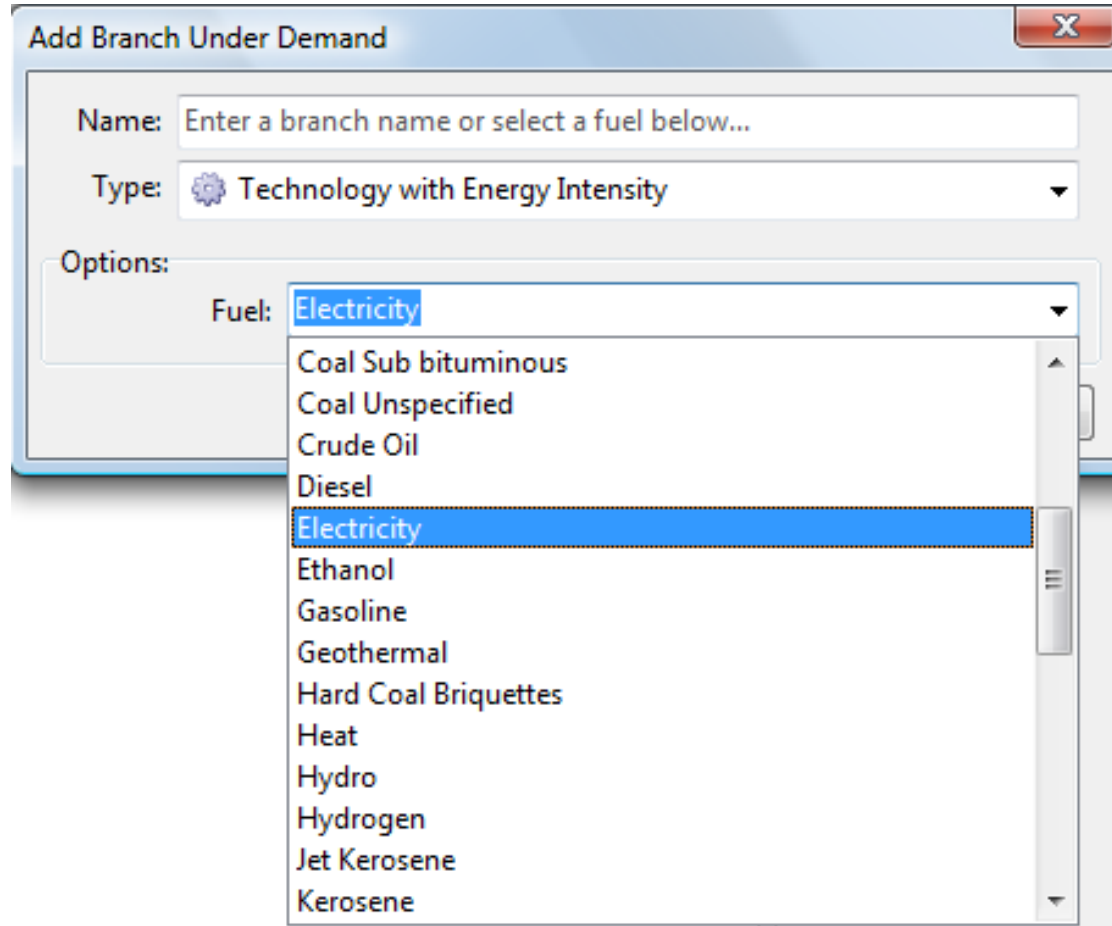
Name: Enter a branch name or select a fuel below...

Type:  Category

-  Category
-  Category with Energy Intensity
-  **Technology with Energy Intensity**
-  Technology with Total Energy
-  Transport Technology (Stock Turnover Method)
-  Other Technology (Stock Turnover Method)




# Add Technology branch



**Add Branch Under Demand**

Name:

Type:  Technology with Energy Intensity

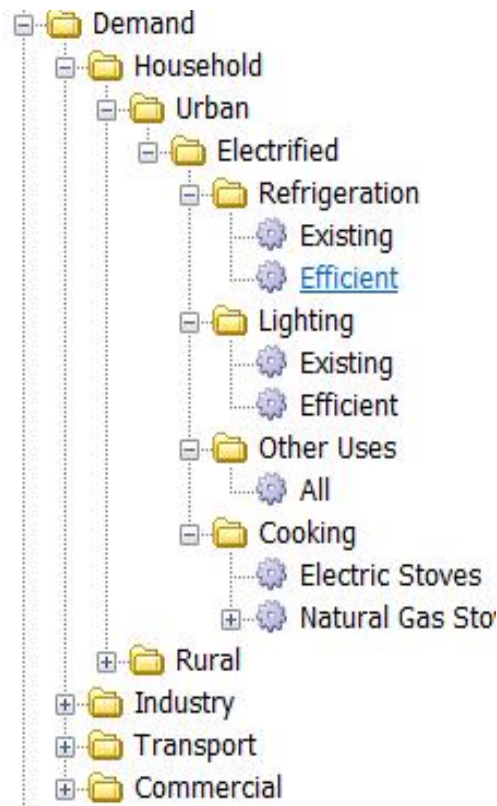
Options:

Fuel: **Electricity**

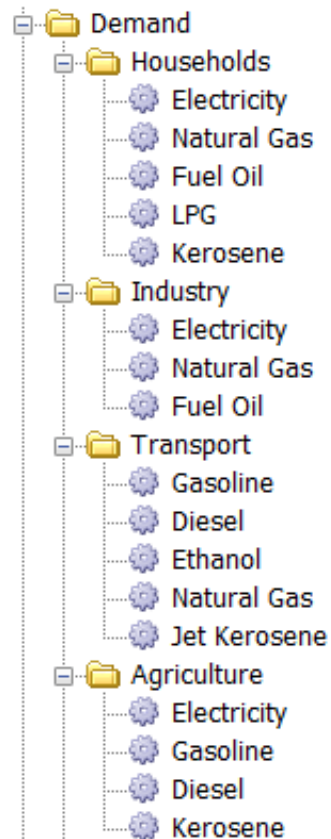
- Coal Sub bituminous
- Coal Unspecified
- Crude Oil
- Diesel
- Electricity**
- Ethanol
- Gasoline
- Geothermal
- Hard Coal Briquettes
- Heat
- Hydro
- Hydrogen
- Jet Kerosene
- Kerosene



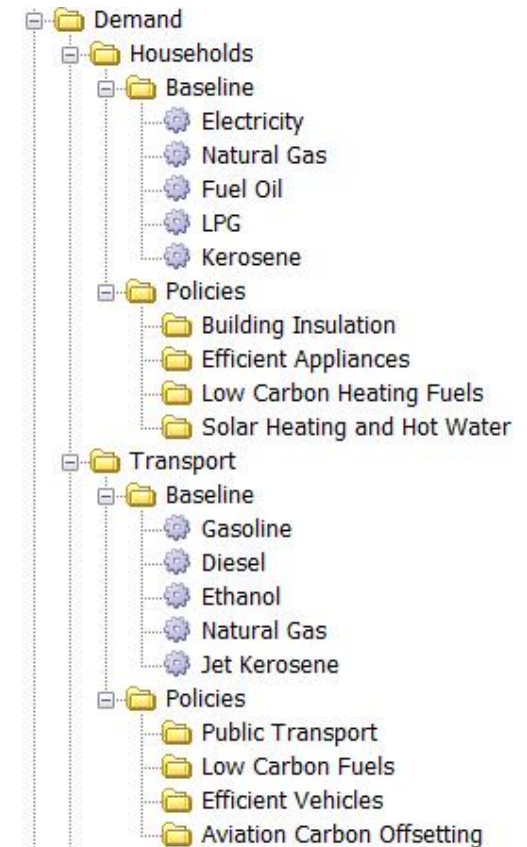
# Tree branch / Structure (1/2)



Bottom-up



Top-down



Hybrid



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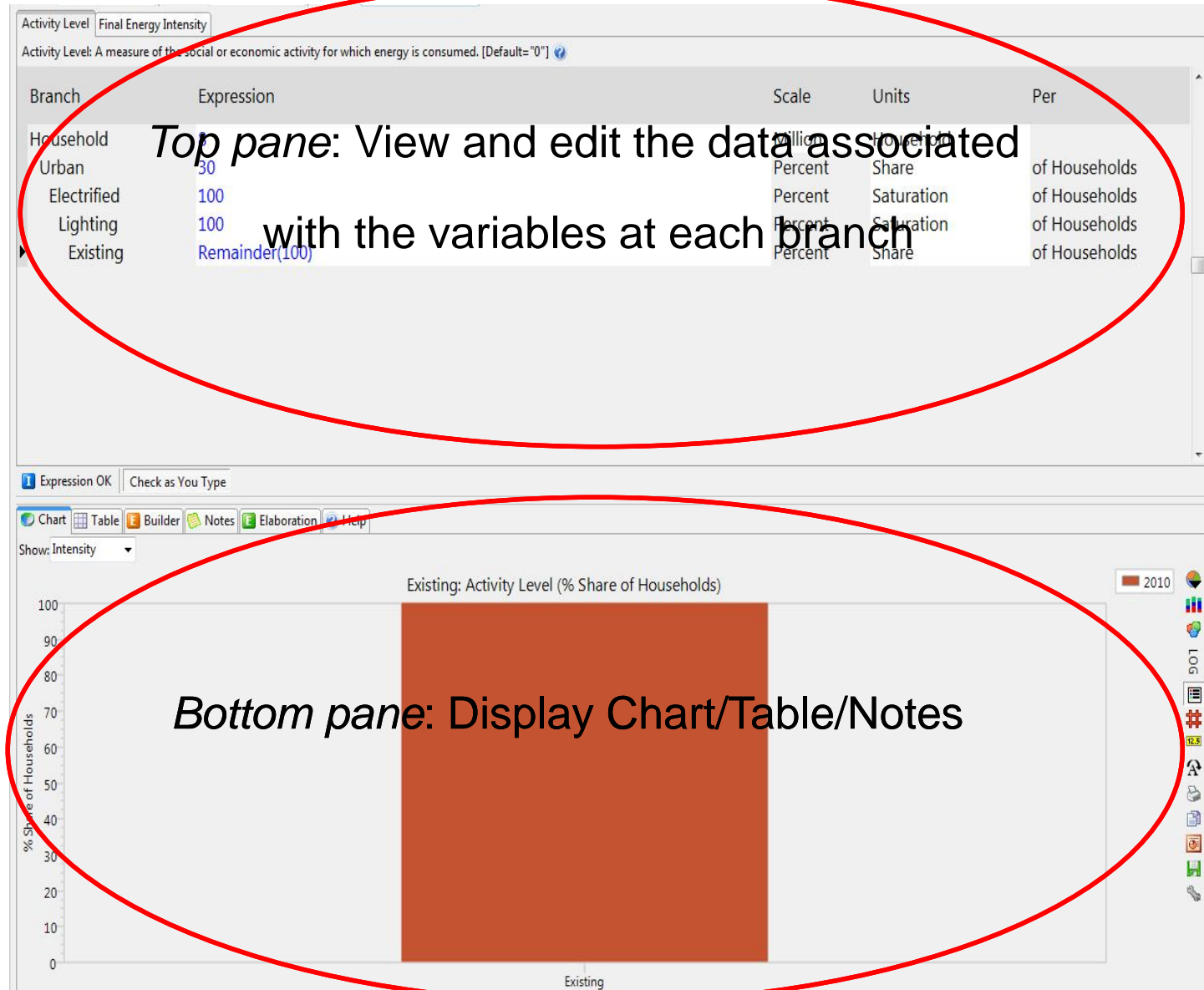
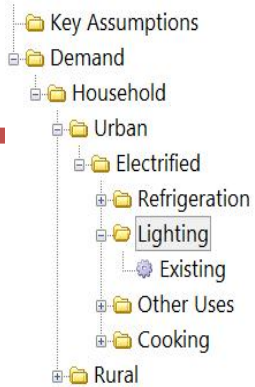
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# Tree branch / Structure (2/2)

- **Bottom-up**
  - Detailed end-use approach
  - Data intensive
  - Impacts of technology-based policies
- **Top-down**
  - Aggregate approach
  - Less data intensive than bottom-up
  - Impacts of fiscal policies
- **Hybrid**
  - Less data intensive than bottom-up
  - Limited to cases when measures are small vs baseline



# Data entry table



# Historical data input

- Current Accounts
- Data requirements
  - Demographic
  - Economic
  - Energy demand
    - Activity level: measure of economic activity in sector
    - Energy intensity: final energy consumption/activity level
- Different ways of inserting historical data
  - Manually
  - [Excel file](#)





# National official data sources

- Statistical service
- Ministries relevant with:
  - energy/industry
  - environment
  - agriculture
- Public energy companies
- Regulatory authorities/committees



# International official data sources

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- World Bank
- International Energy Agency (IEA)
- United Nations (UN)
- Eurostat
- European Environmental Agency (EEA)



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# Let's practice!

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