

Introduction to LEAP

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- User interface
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Basics

“Long-range Energy Alternatives Planning system”

- **Identity**

Scenario-based modelling software for energy planning and GHG mitigation assessment (download from www.energycommunity.org)

- **Use**

Build models of different-scale energy systems
Forecast GHG and local air pollutant emissions

- **Examples of use**

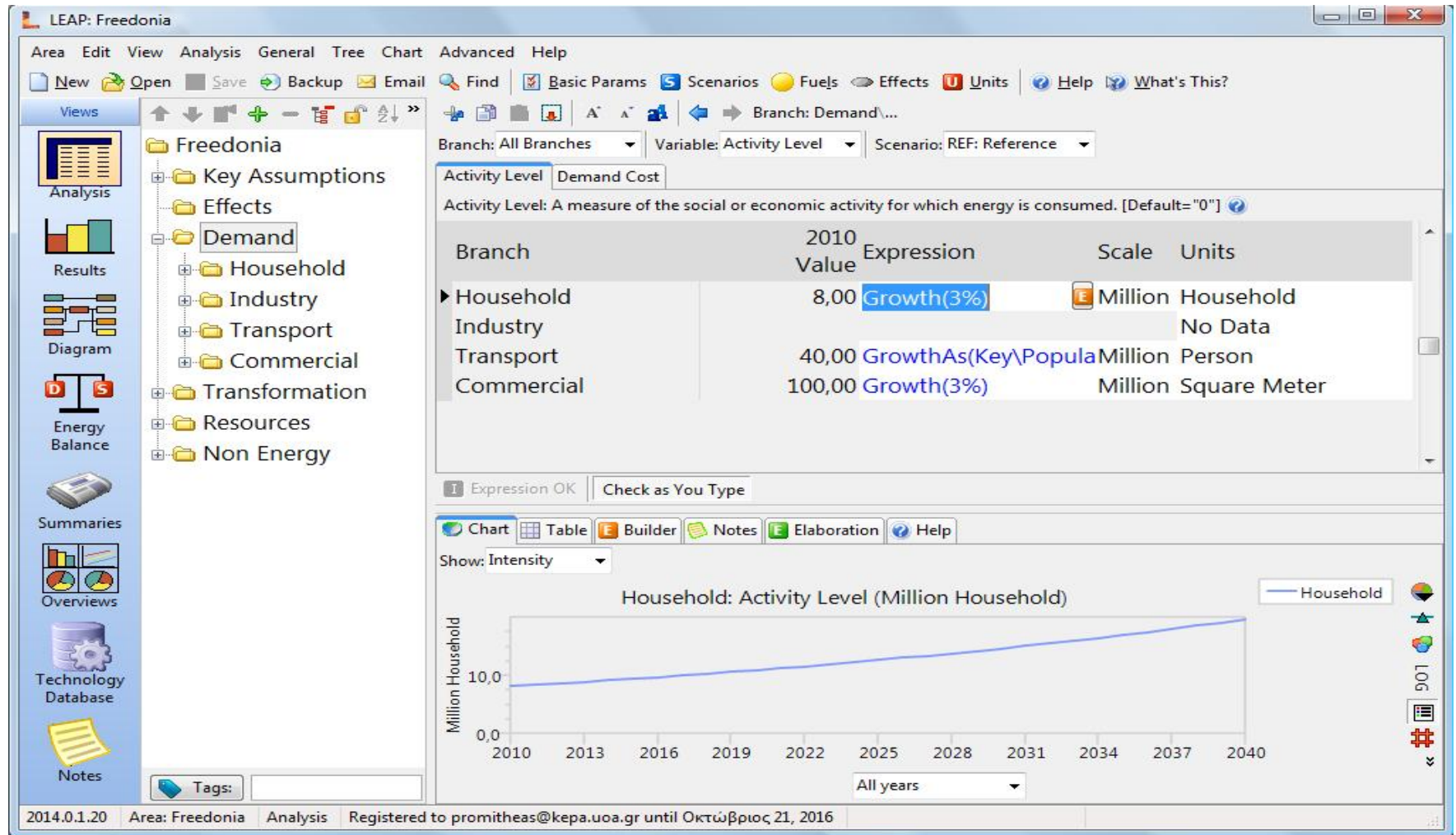
National Communications to UNFCCC, national strategies, funded projects

- **Characteristics**

Low initial data requirements
User-friendly, but needs training

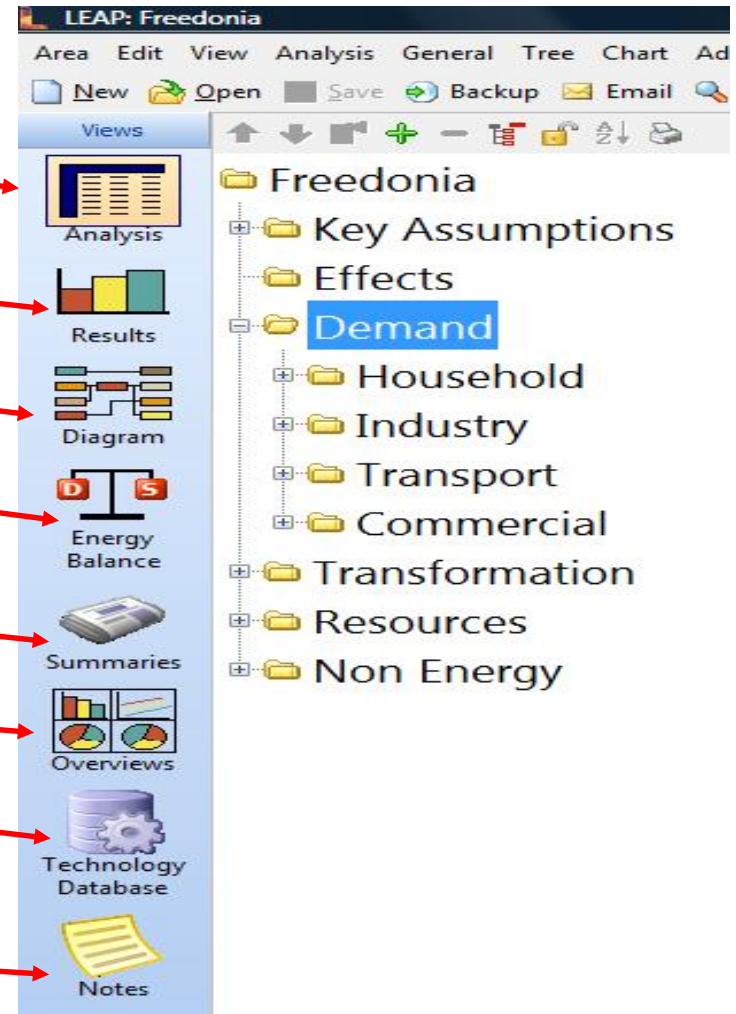


User Interface

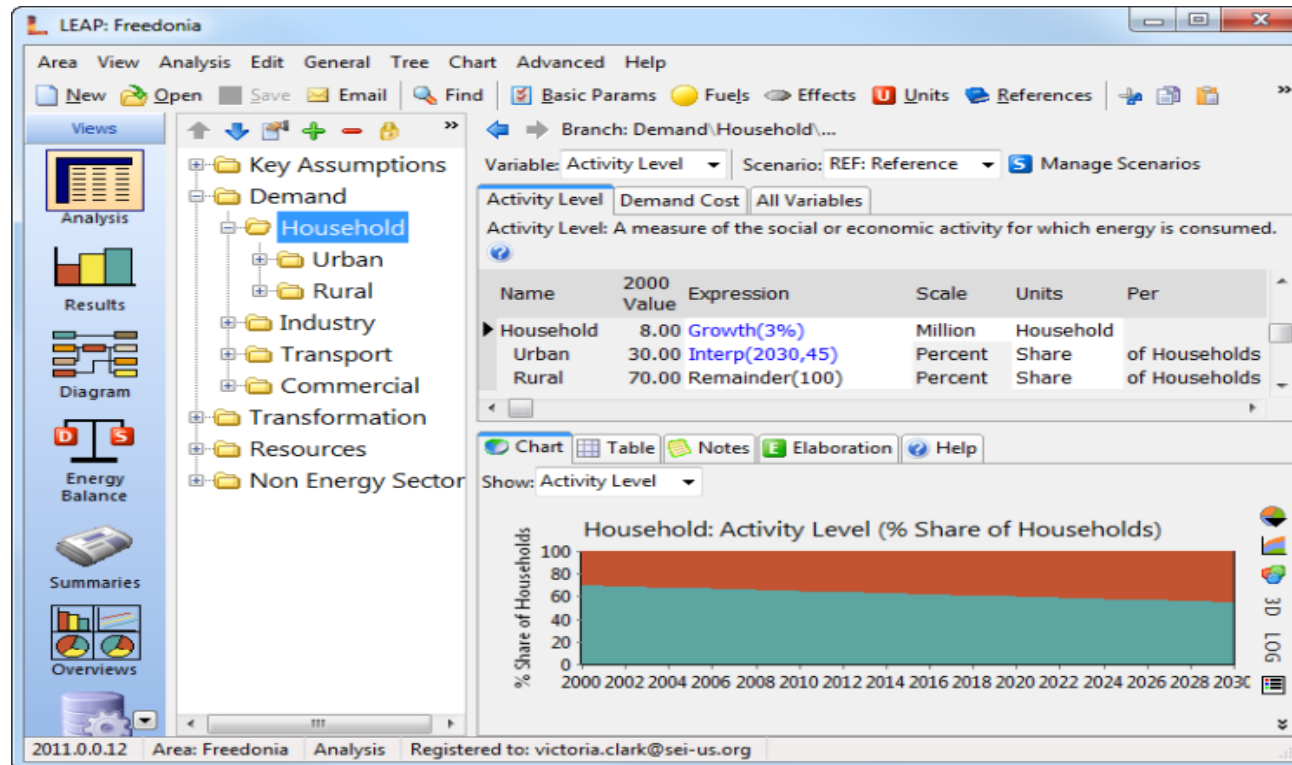


User Interface/View bar

- Analysis
- Results
- Diagram
- Energy Balance
- Summaries
- Overviews
- Technology database
- Notes



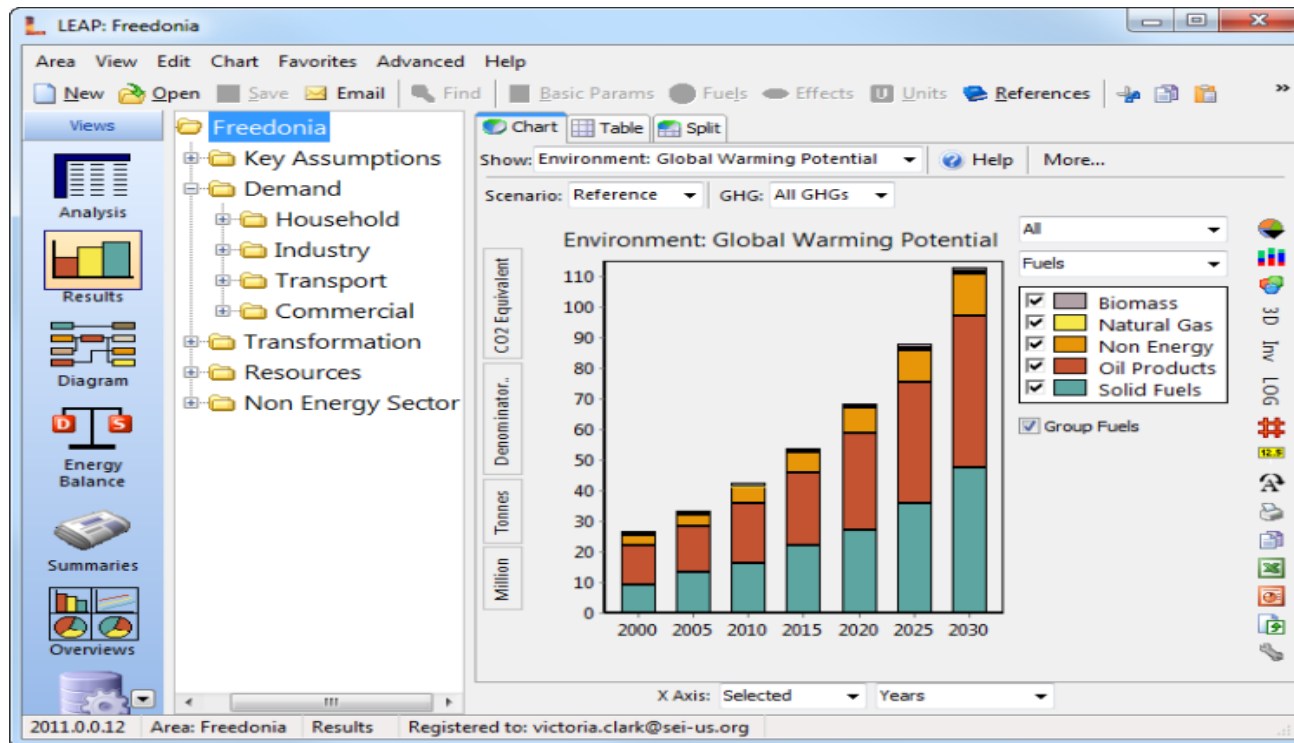
Analysis View



- Creation of tree structures & scenarios
- Import of data for both historical years and forward-looking scenarios



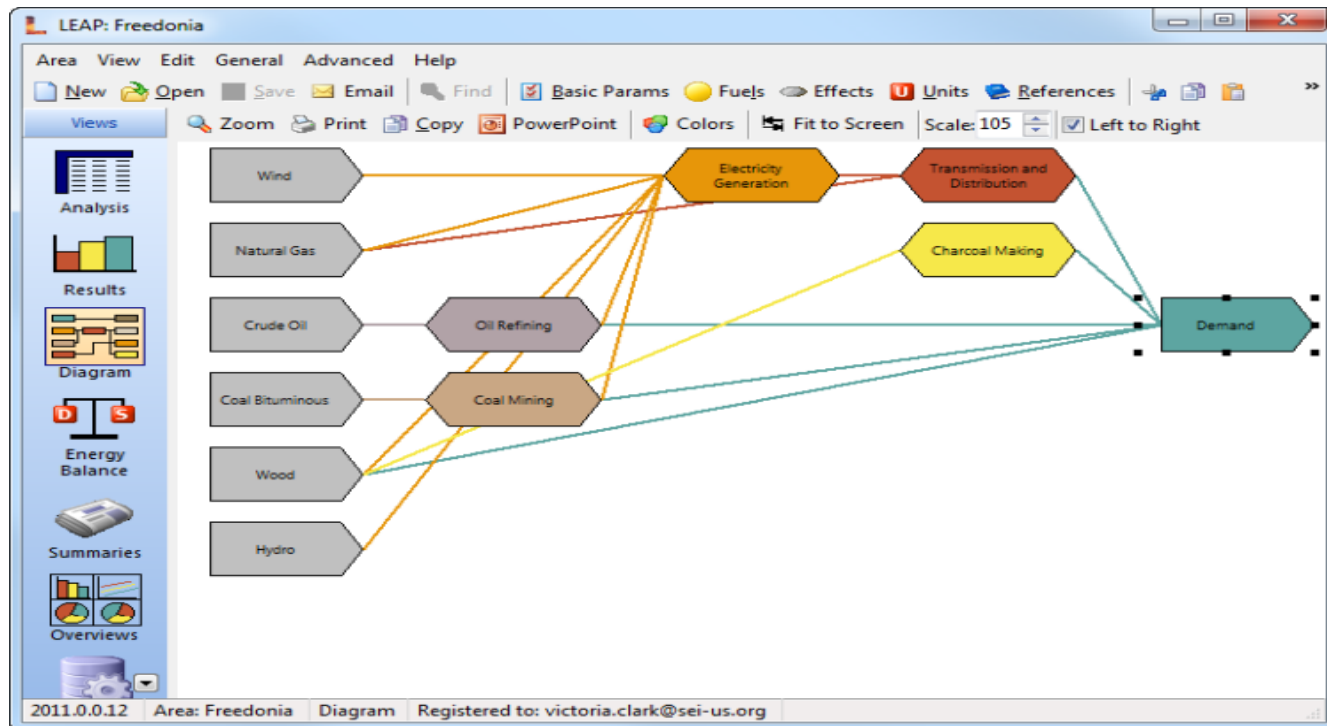
Results View



- Display of detailed or aggregated results as charts, tables or maps
 - Different ways of format: unit of measurement, type of charts, colors, numeric format
- Export to Excel and PowerPoint



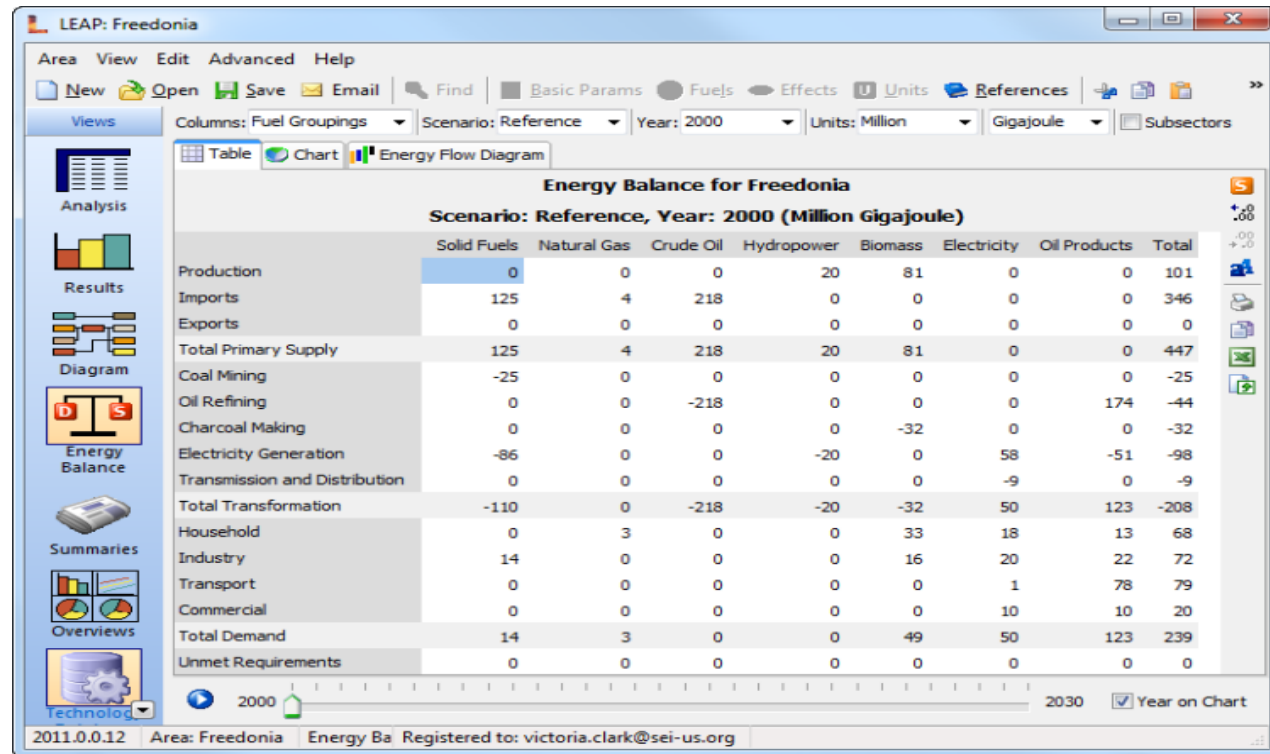
Diagram View



- Display of main energy flows from resource extraction, through the conversion and transport of fuels, to final energy demand
- Zoom in to examine processes and input/output fuels within each module



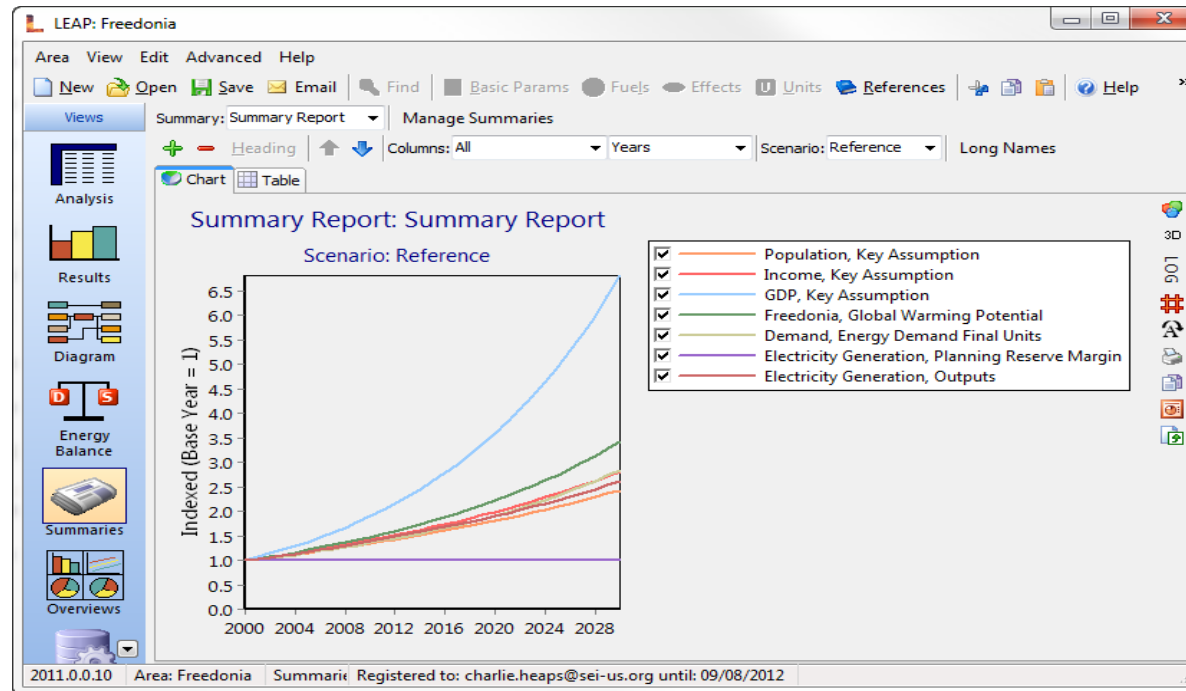
Energy Balance View



- Display in standard format used by IEA and most national energy planning agencies for any scenario and year
 - as table, chart, or flow diagram



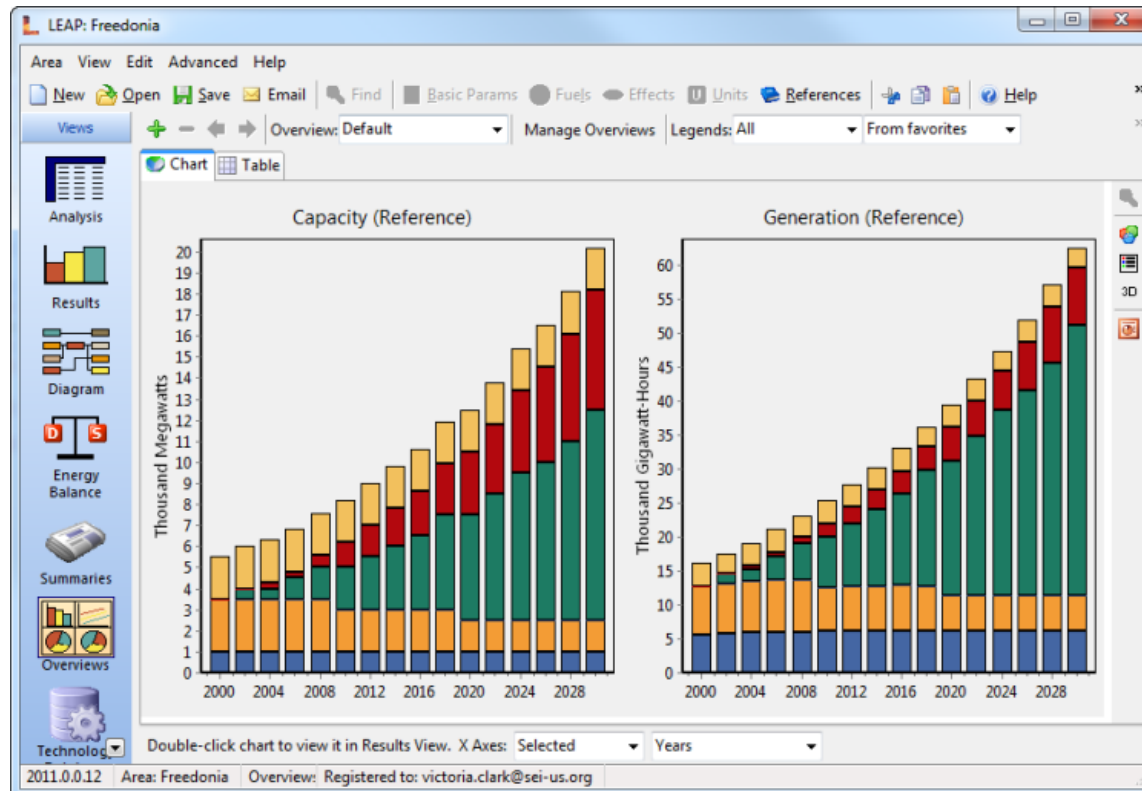
Summaries View



- Customized tabular and graphical reports
- Cost-benefit summary report



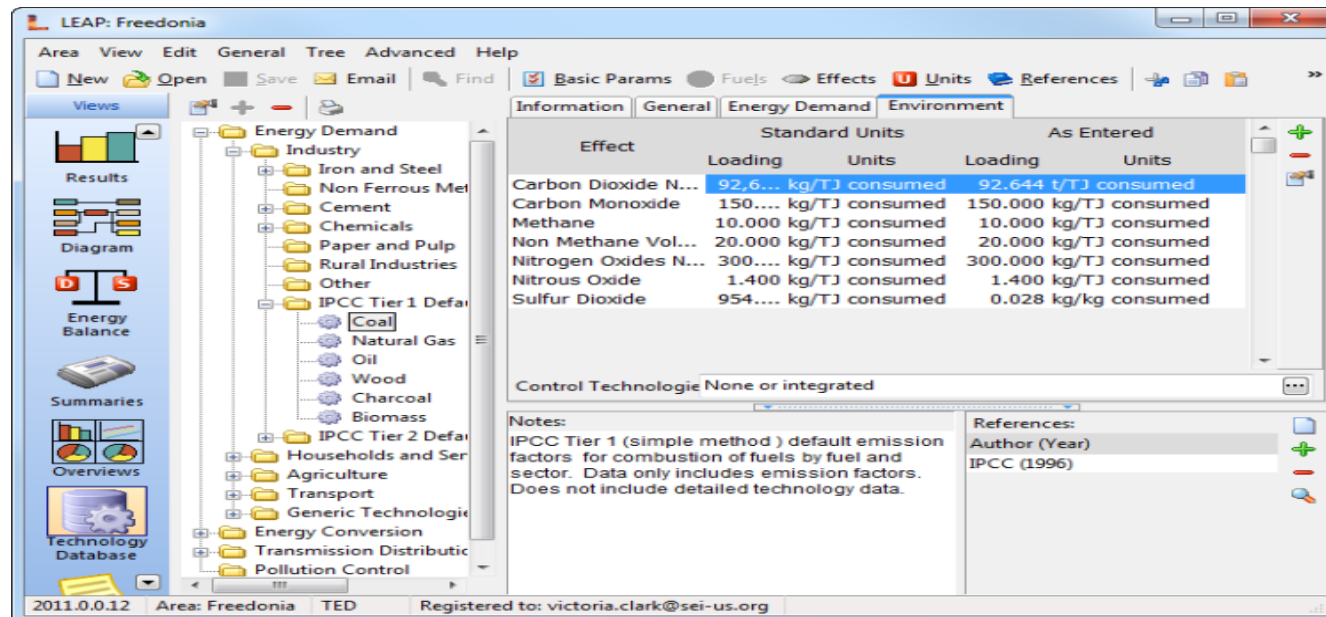
Overviews View



- Favorite charts are saved and grouped together



Technology Database

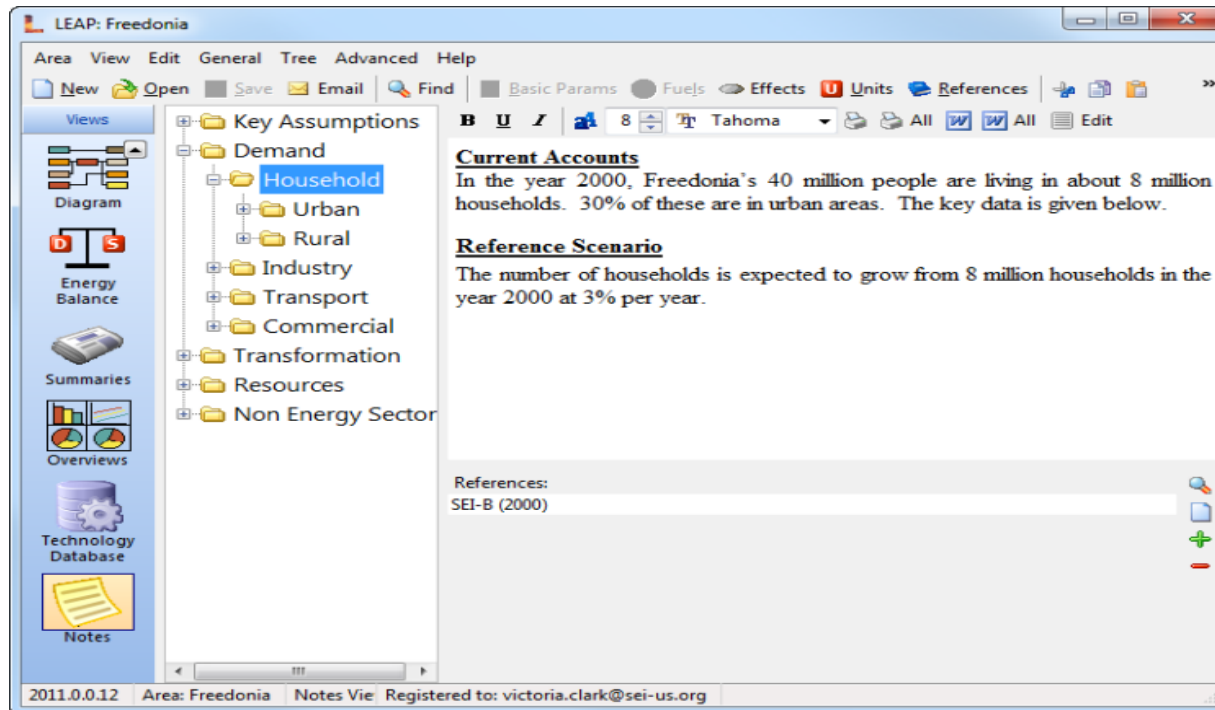


Technology and Environmental Database (TED)

- Information and data on energy technologies
 - Technical characteristics, costs and environmental impacts
 - Qualitative information on availability, appropriateness, cost-effectiveness
- Emission factors



Notes View



- Document of data, assumptions and methods
- Enter notes at each branch of the tree data structure
- Print or export to Microsoft Word for use in reports



User Interface/main toolbar

The screenshot shows the LEAP: Freedonia software interface. The main toolbar includes the following icons and labels:

- New**: Create new Area
- Open**: Open an existing Area
- Save**: Save
- Backup**: Backup
- Email**: Email
- Find**: Find
- Basic Params**: Define the basic settings of analysis
- Scenarios**: View, create and edit scenarios
- Fuels**: View or edit the list of fuels used
- Effects**: Effects
- Units**: Units
- Help**: Help
- What's This?**: What's This?

Below the toolbar, there are several dropdown menus and buttons:

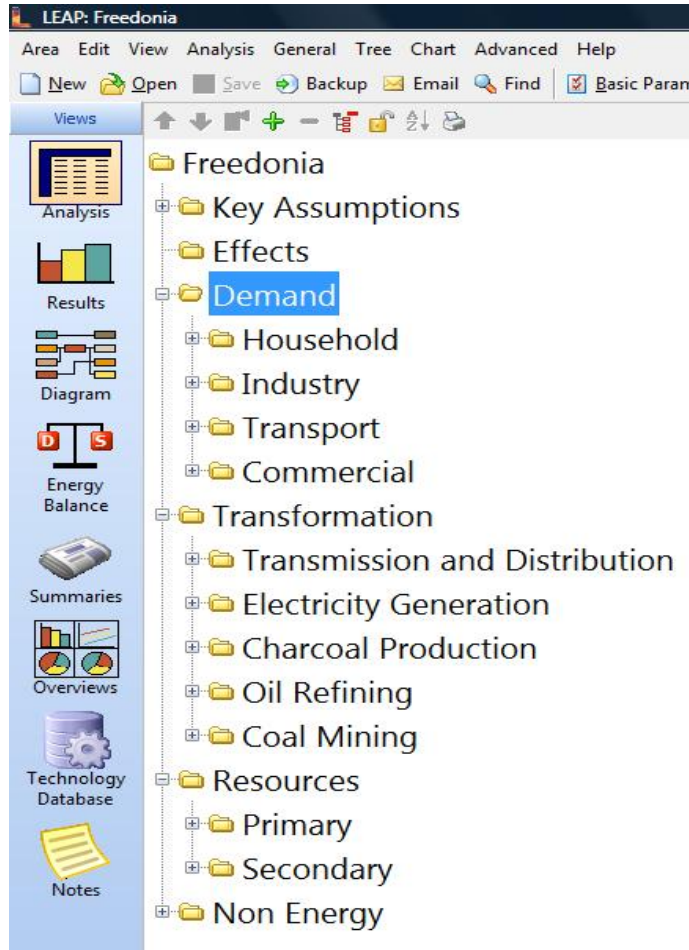
- Branch: Demand\...**
- Branch: All Branches**
- Variable: Activity Level**
- Scenario: IND: Industrial Efficiency**

Callouts point to the following functions:

- Create new Area
- Open an existing Area
- Define the basic settings of analysis
- View, create and edit scenarios
- View or edit the list of fuels used
- Select the scenario to work on



User Interface/tree structure

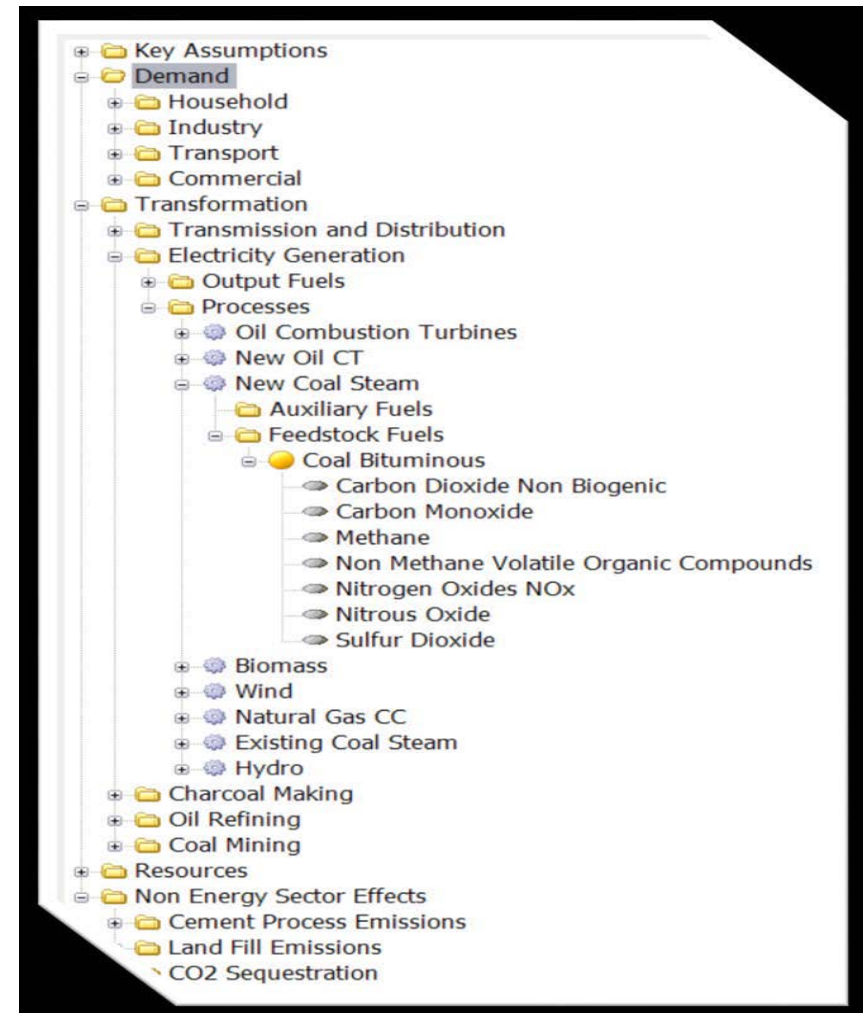


- Representation of energy system
 - 5 major categories
- Main data structure for organizing data/models and reviewing results
- Detailed/end-use oriented, or highly aggregate by sector



Data requirements

- Demographic
- Economic
- General energy
- Energy demand
 - Activity level
 - Energy intensity
- Transformation
- Environmental
- Fuels



The main steps for scenario analysis

1. Create an Area
2. Go to Basic parameters
3. Choose the elements of analysis
4. Create the tree
5. Import historical data in Current Accounts
6. Create the scenarios
7. Import the necessary assumptions
8. Push the “Results” button



To be continued...

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