BLCC Software Workshop

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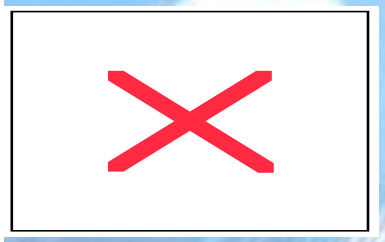
www.emoenergy.com



BLCC Software Workshop

Life Cycle Cost Analysis (LCCA)

- **Method to Compare alternative designs that have different Initial and Operating Costs**
  - **Energy Costs**
  - **Water Costs**
  - **Maintenance Costs**
  - **Replacement Costs**
- **Includes time value of money over study period**
  - **Projected Utility Rate Changes**
  - **Effect of Delaying Implementation**
  - **Effect of Increase in replacement equipment Costs**

BLCC Software Workshop

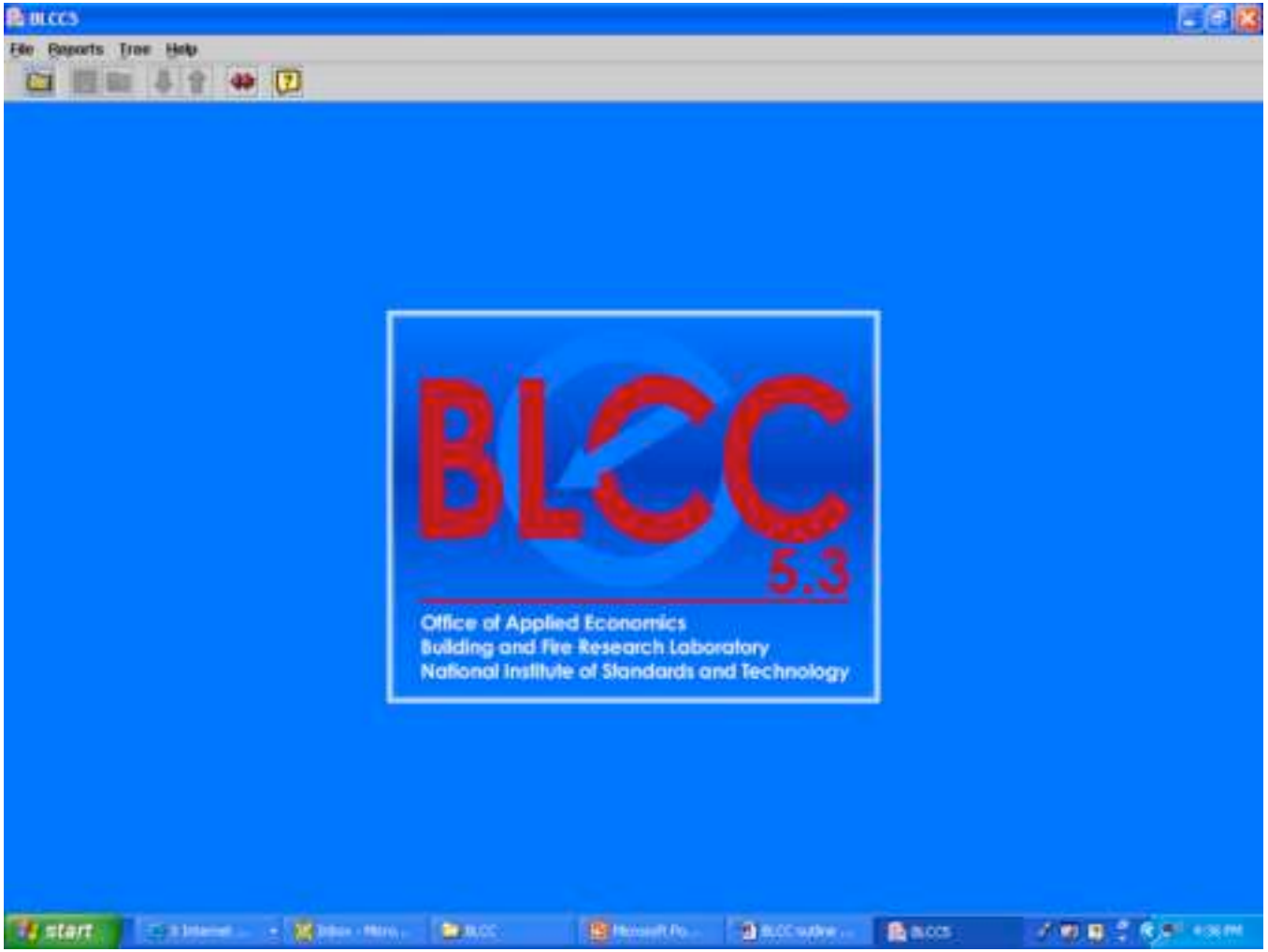
Development of BLCC Software

- **Developed by the National Institute of Standards and Technology (NIST)**
- **Originally DOS based program**
- **BLCC5 is a windowed version of its predecessor, the DOS-based BLCC 4.9-06.**
- **Supporting Documents:**
  - Handbook 135, the *Life-Cycle Costing Manual for the Federal Energy Management Program (FEMP)*
  - The Annual Supplement to Handbook 135 (ASHB 135), *Energy Price Indices and Discount Factors for Life-Cycle Cost Analysis*

Available for free download:

www1.eere.energy.gov/femp/information/download_blcc.html

BLCC Home Window



Introduction to BLLC

Six Modules

1. **FEMP Analysis, Energy Project**

   for energy and water conservation and renewable energy projects under the FEMP rules based on 10 CFR 436

2. **Federal Analysis, Financed Project**

   for federal projects financed through Energy Savings Performance Contracts (ESPC) or Utility Energy Services Contracts (UESC) as authorized by Executive Order 13123 (6/99)

3. **OMB Analysis, Non-Energy Project**

   Projects subject to OMB Circular A-94 for non-energy, federal government construction projects, but not water resource projects;

4. **MILCON Analysis, Energy Project**

   for energy and water conservation and renewable energy projects in military construction

5. **MILCON Analysis, ECIP Project**

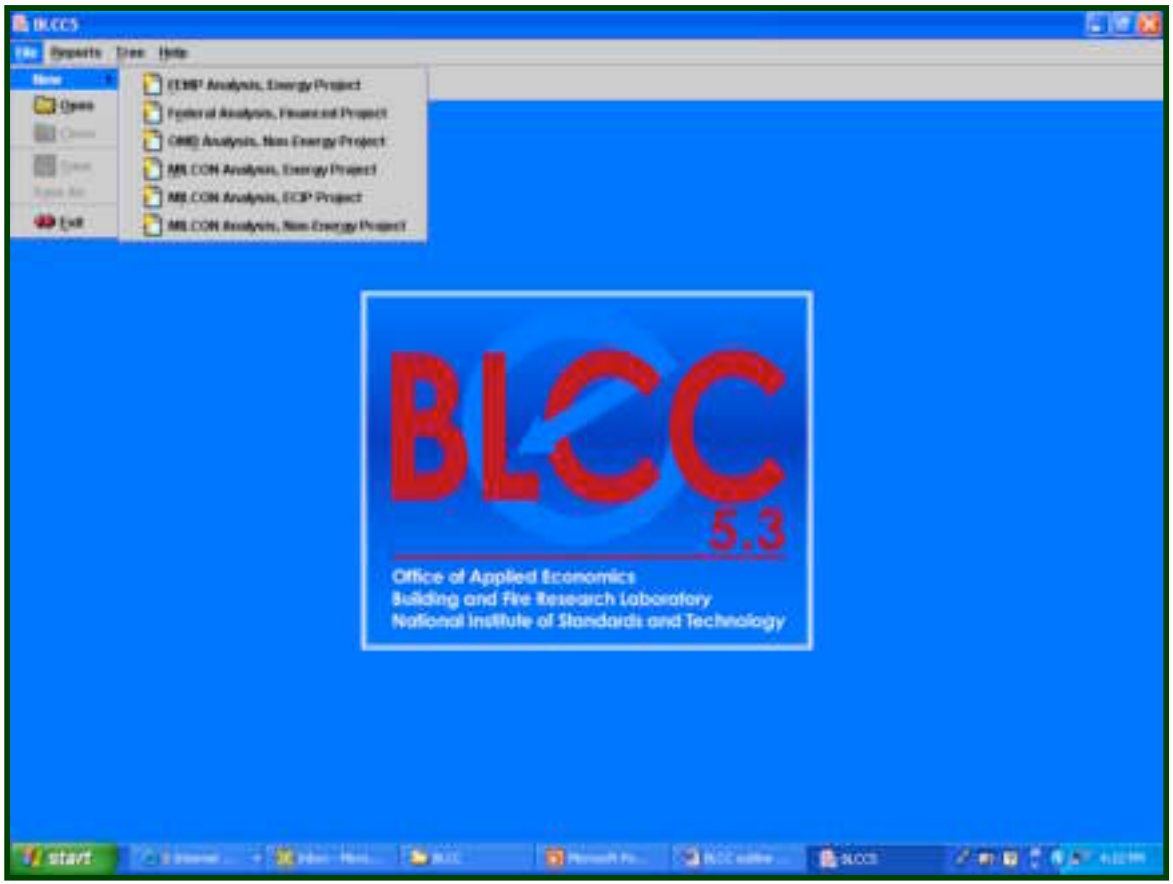
   for energy and water conservation projects under the Energy Conservation Investment Program (ECIP)

6. **MILCON Analysis, Non-Energy Project**

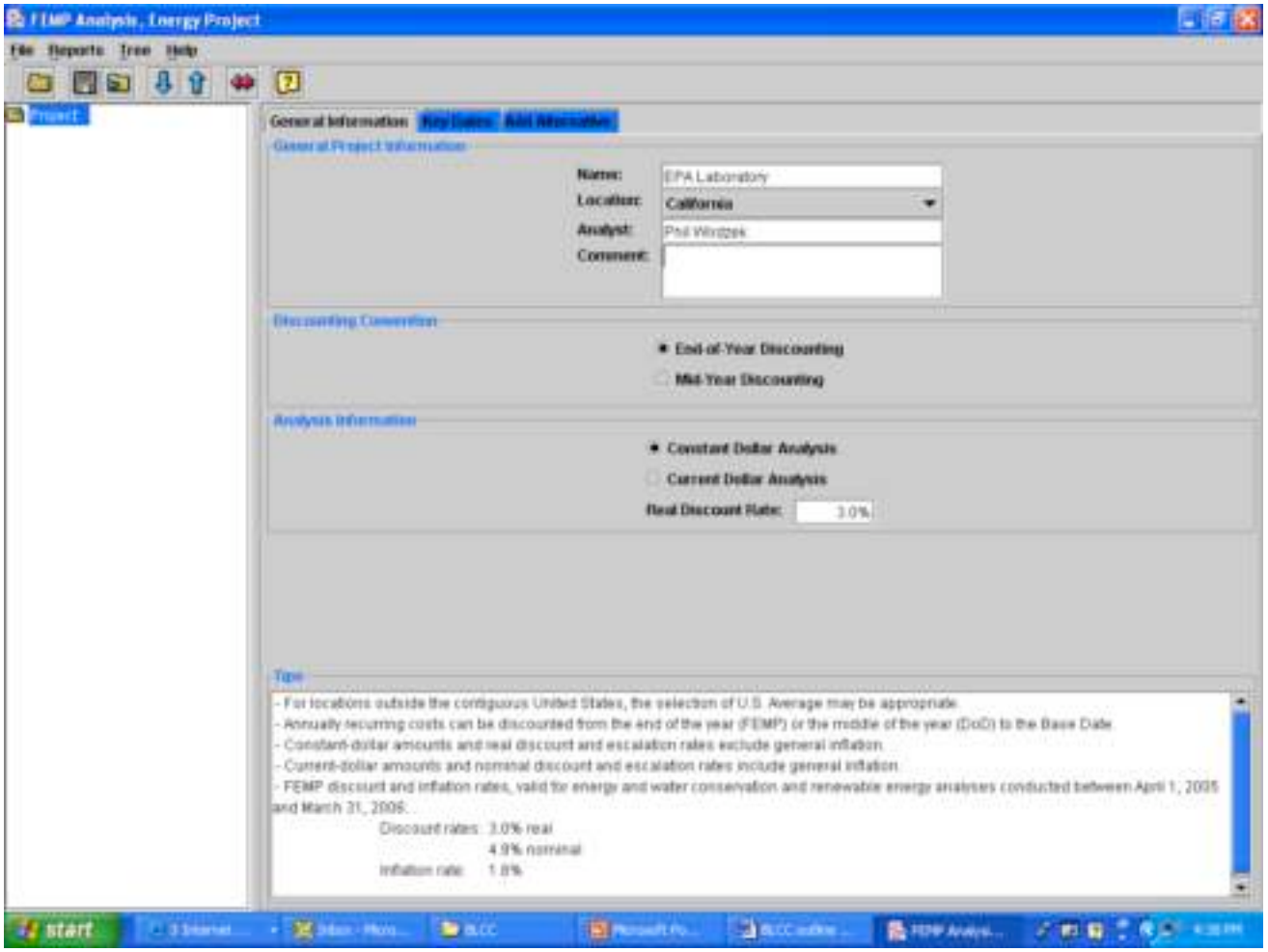
   for military construction designs that are not primarily intended for energy or water conservation.

Introduction to BLLC

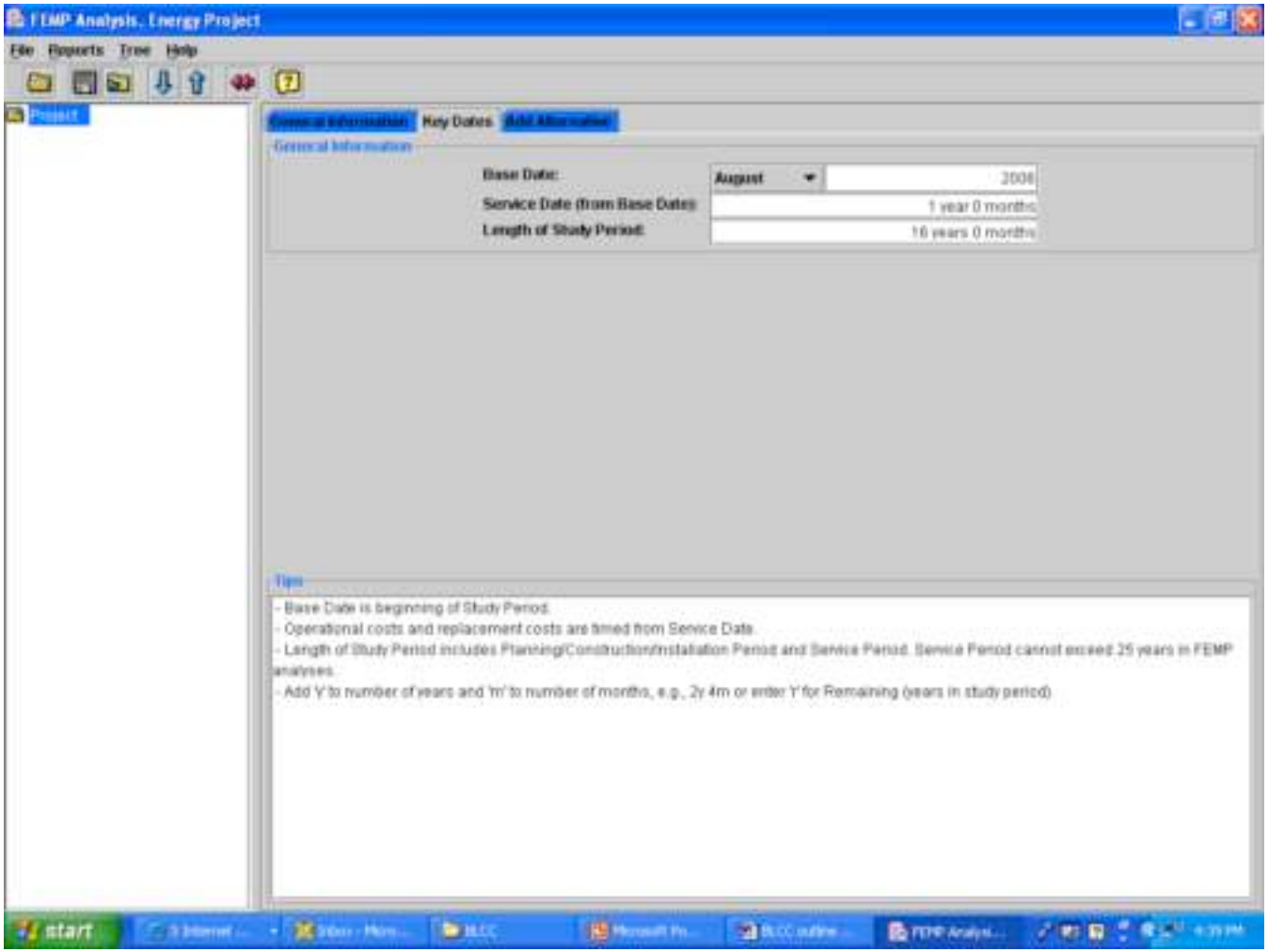
Sample: FEMP Analysis: Energy Project



Step 1. General Information

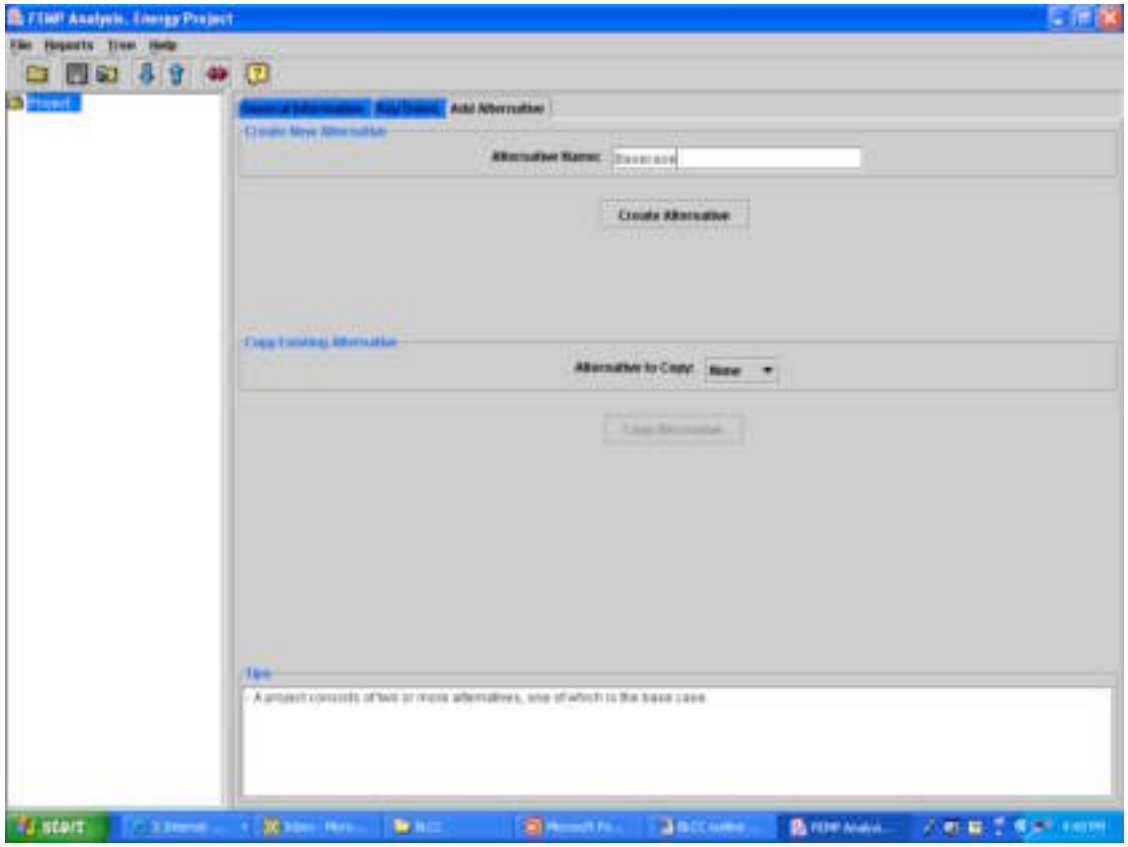


Step 2. Key Dates



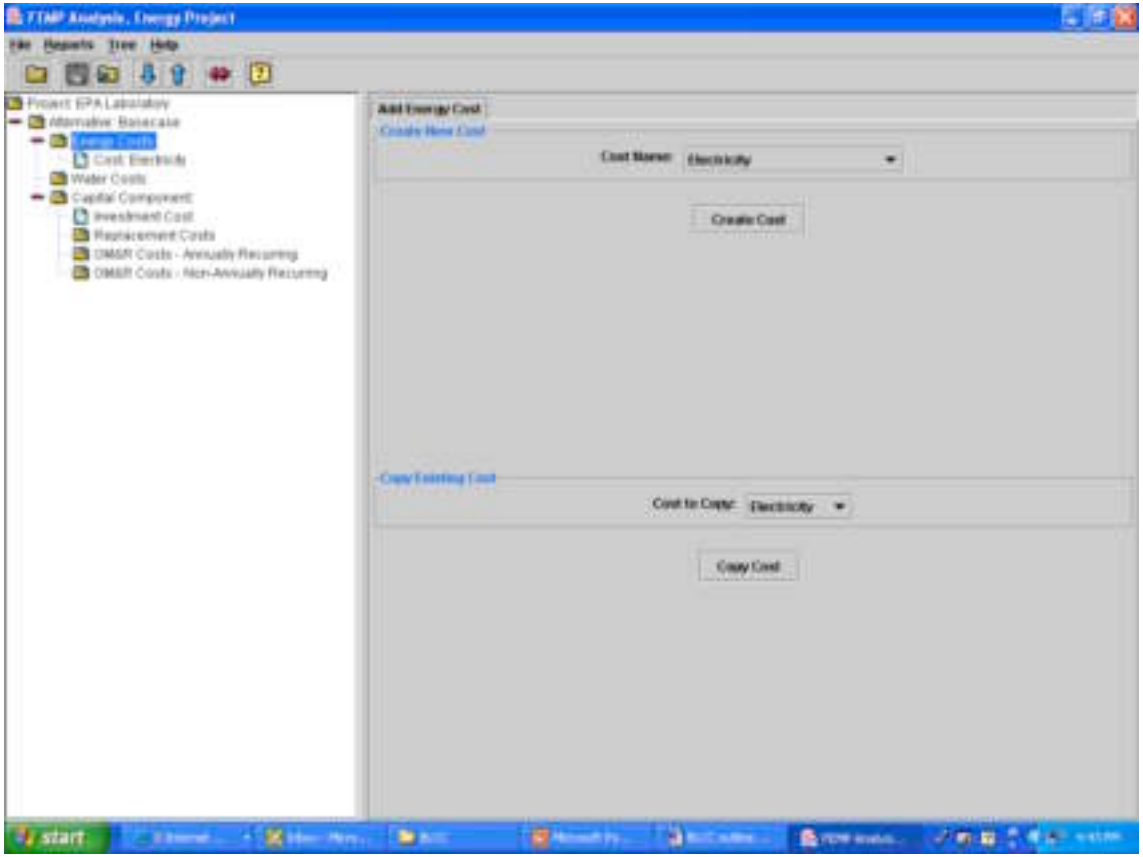
Step 3. Add Alternative

Create basecase



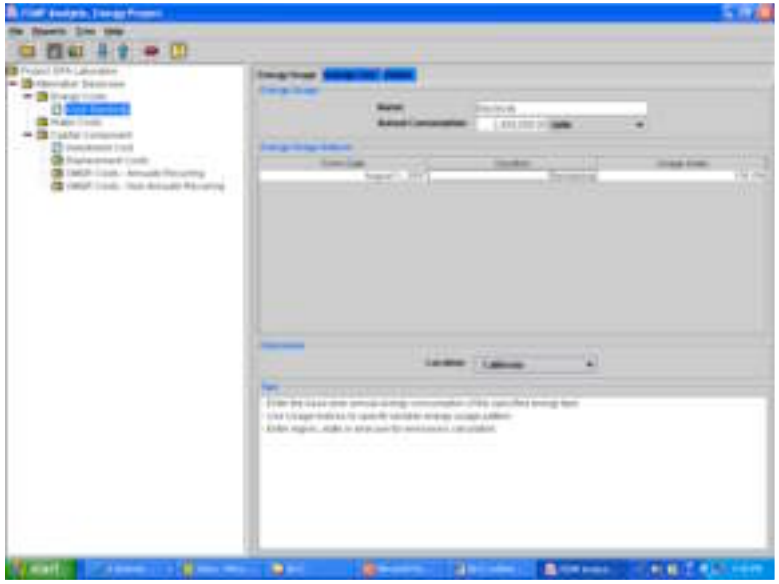
Step 3. Add Alternative

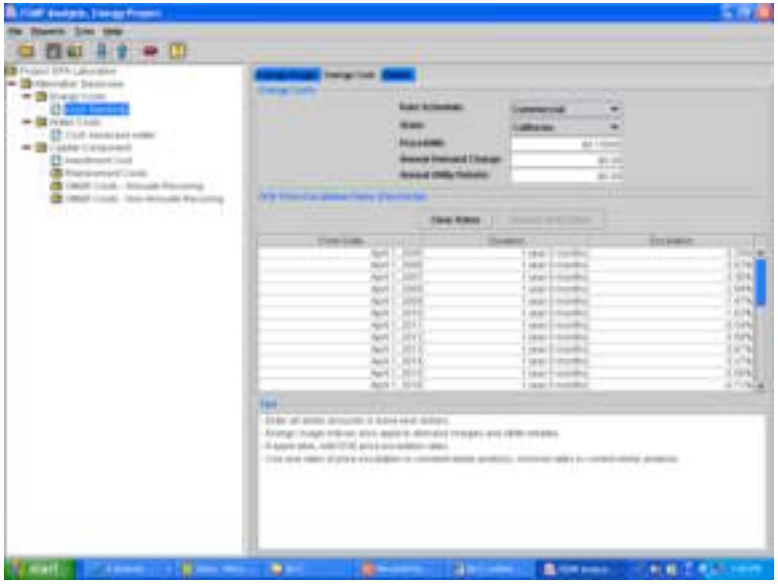
Add Basecase Costs



Step 3. Add Alternative

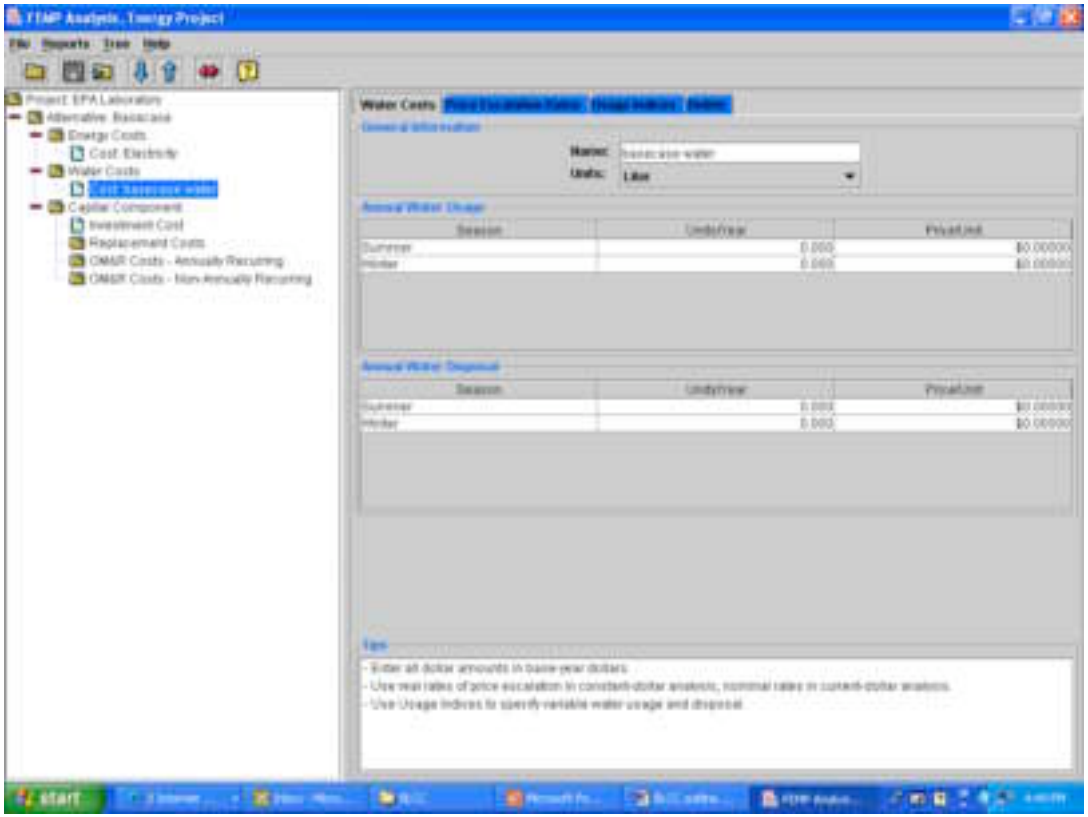
Add Basecase Costs





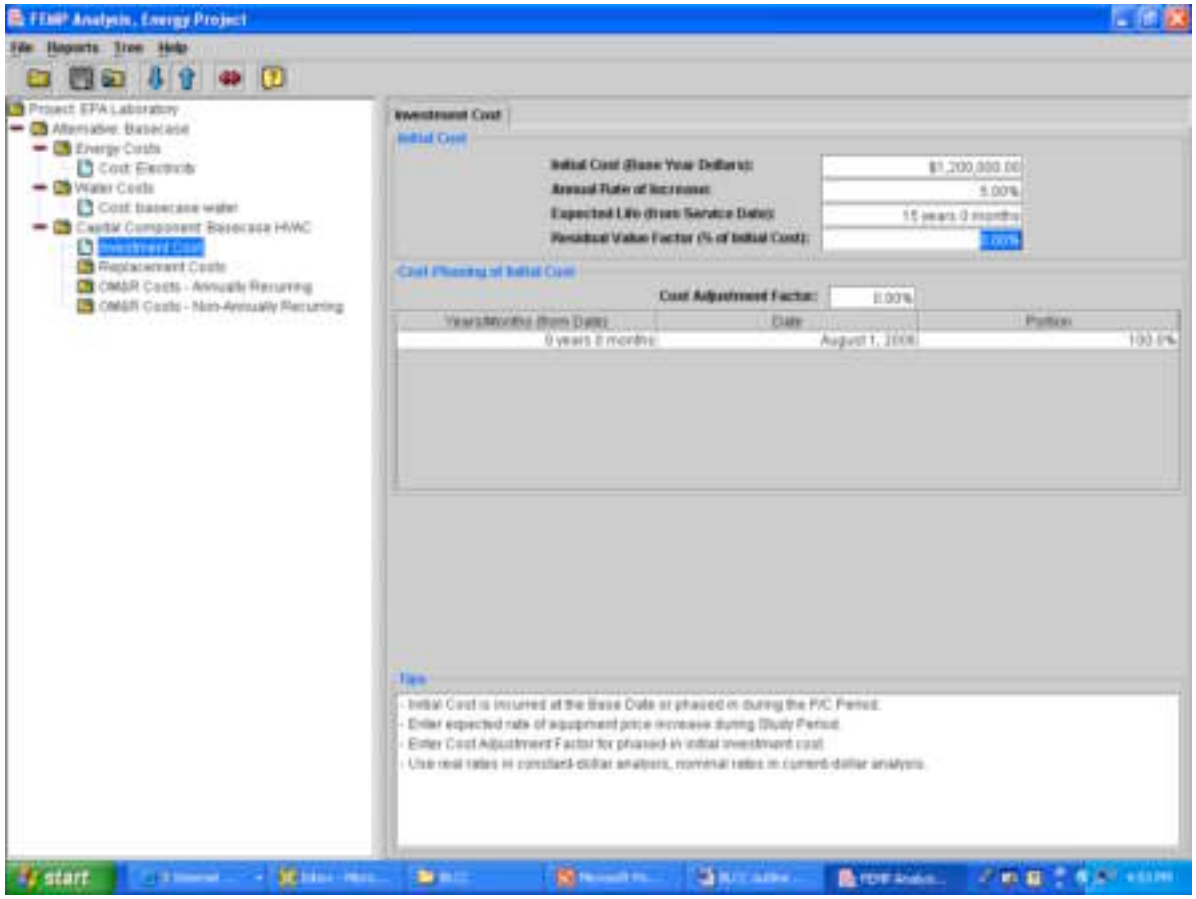
Step 3. Add Alternative

Add Water Basecase Costs (if applicable)



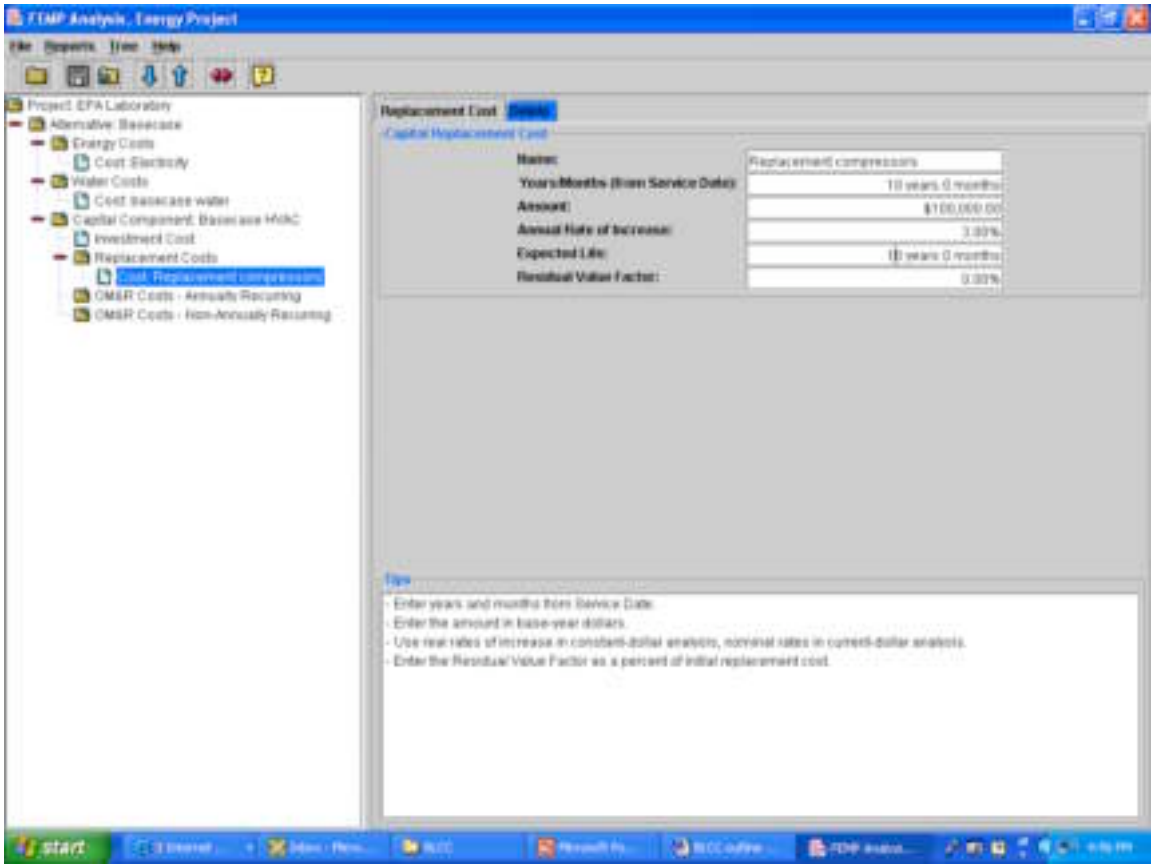
Step 3. Add Alternative

Add Capital Investment Costs



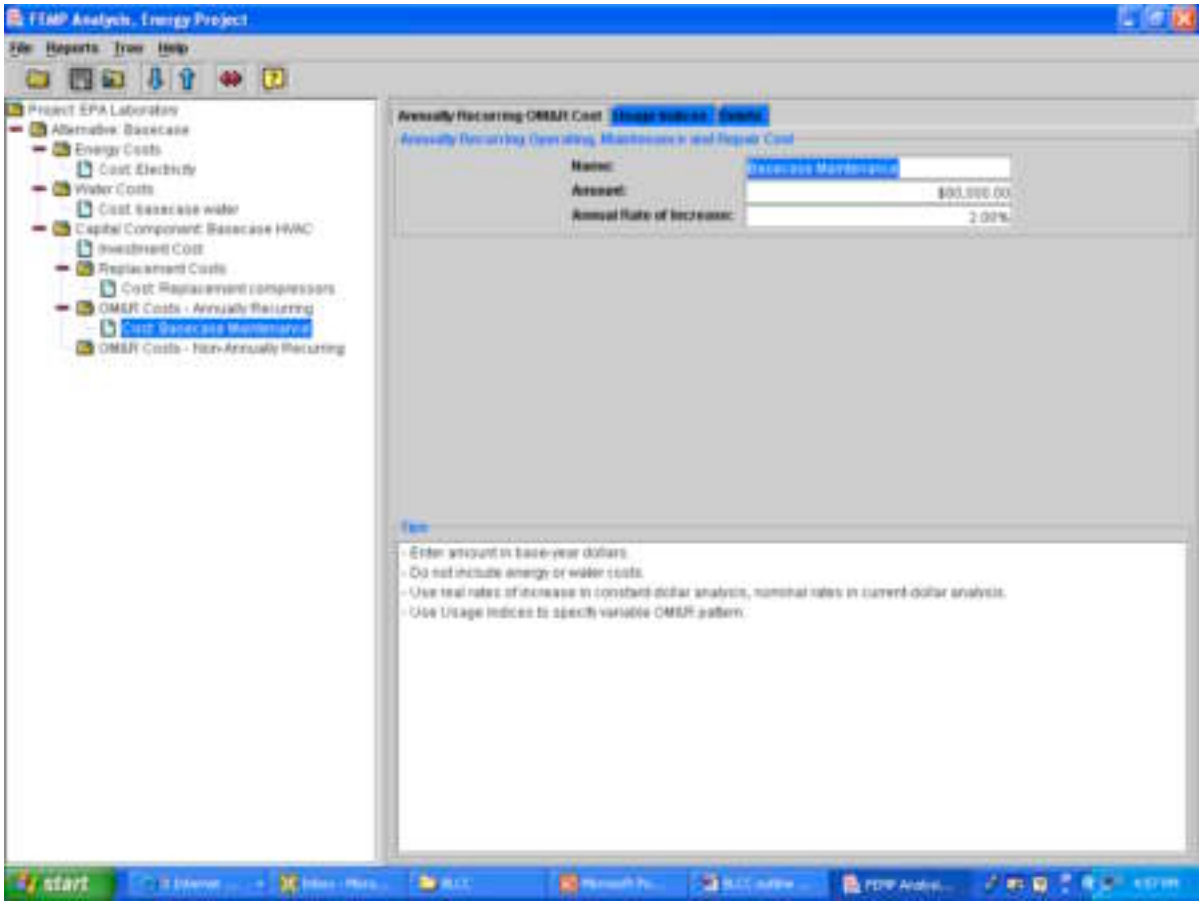
Step 3. Add Alternative

Add Replacement Costs

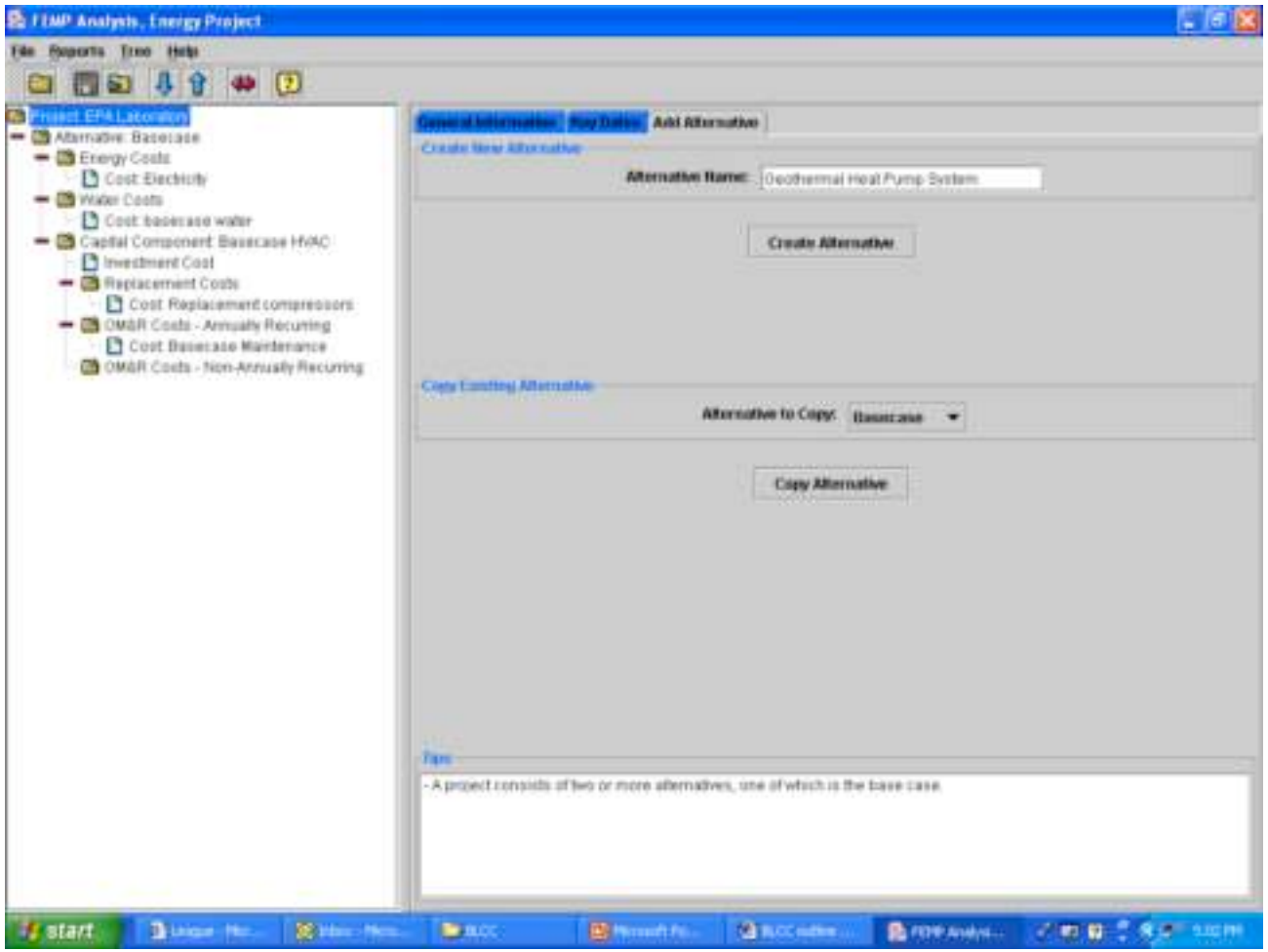


Step 3. Add Alternative

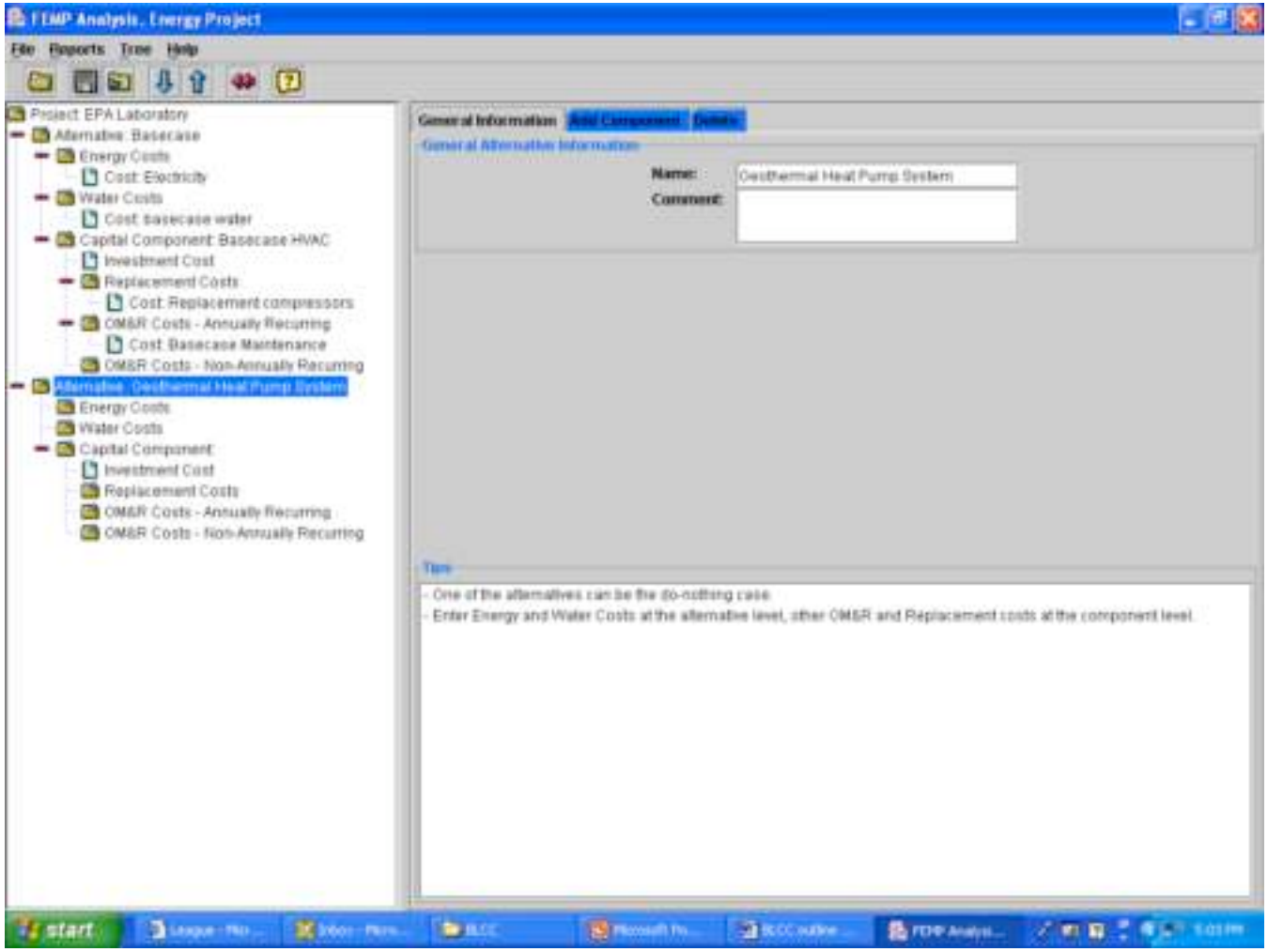
Add OM&R Costs



Add Alternative Design

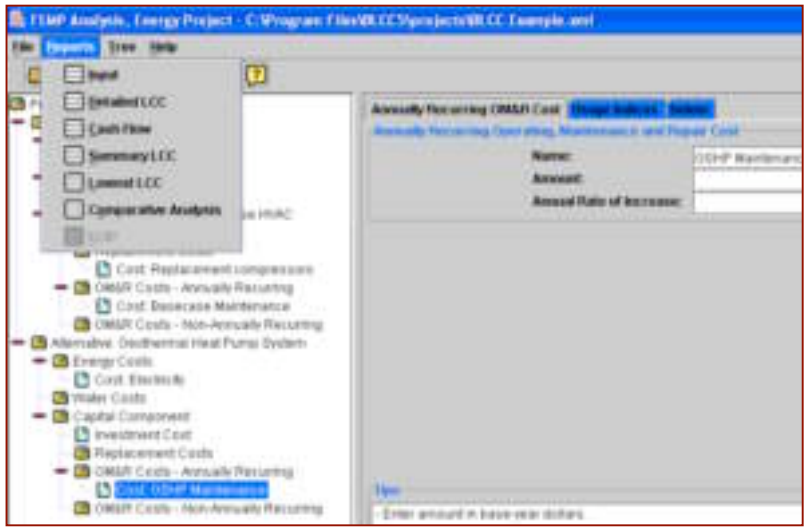


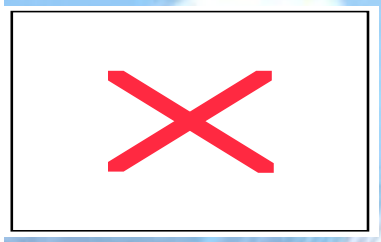
Add Alternative Design



Generate Reports

- Detailed LCC
- Cash Flow
- Summary LCC
- Lowest LCC
- Comparative Analysis



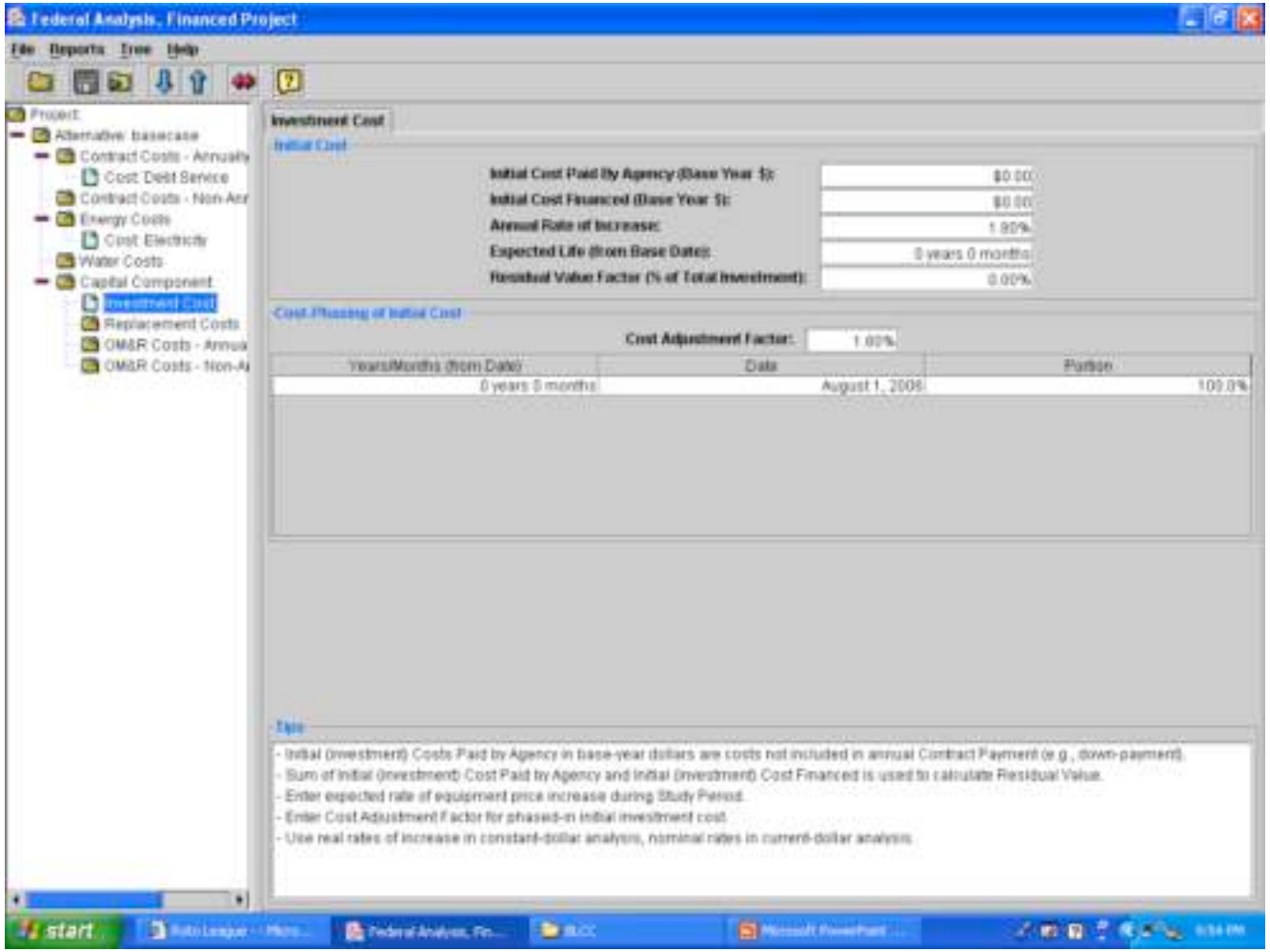


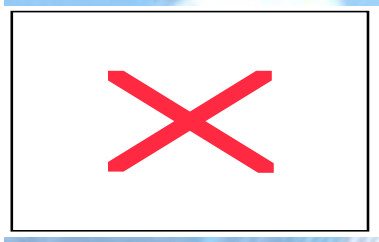
Other Modules

Federal Analysis: Financed Project

1. **No Study Period**
2. **Operation Costs and Maintenance Costs start at Start Date**
3. **Add "Annually Recurring Contract Costs"**
    1. **Annual Contract Payment**
    2. **Debt Service, or**
    3. **Performance Period Expense**

Federal Analysis: Financed Project

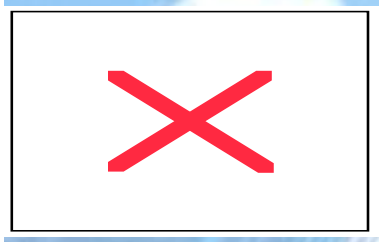




Other Modules

OMB Analysis: Non-Energy Project

1. **Length of Study Period includes Planning/Construction/Installation Period and Service Period.**
2. **OMB analyses allow unlimited study periods.**
3. **Initial Cost is incurred at the Base Date or phased in during the P/C Period.**

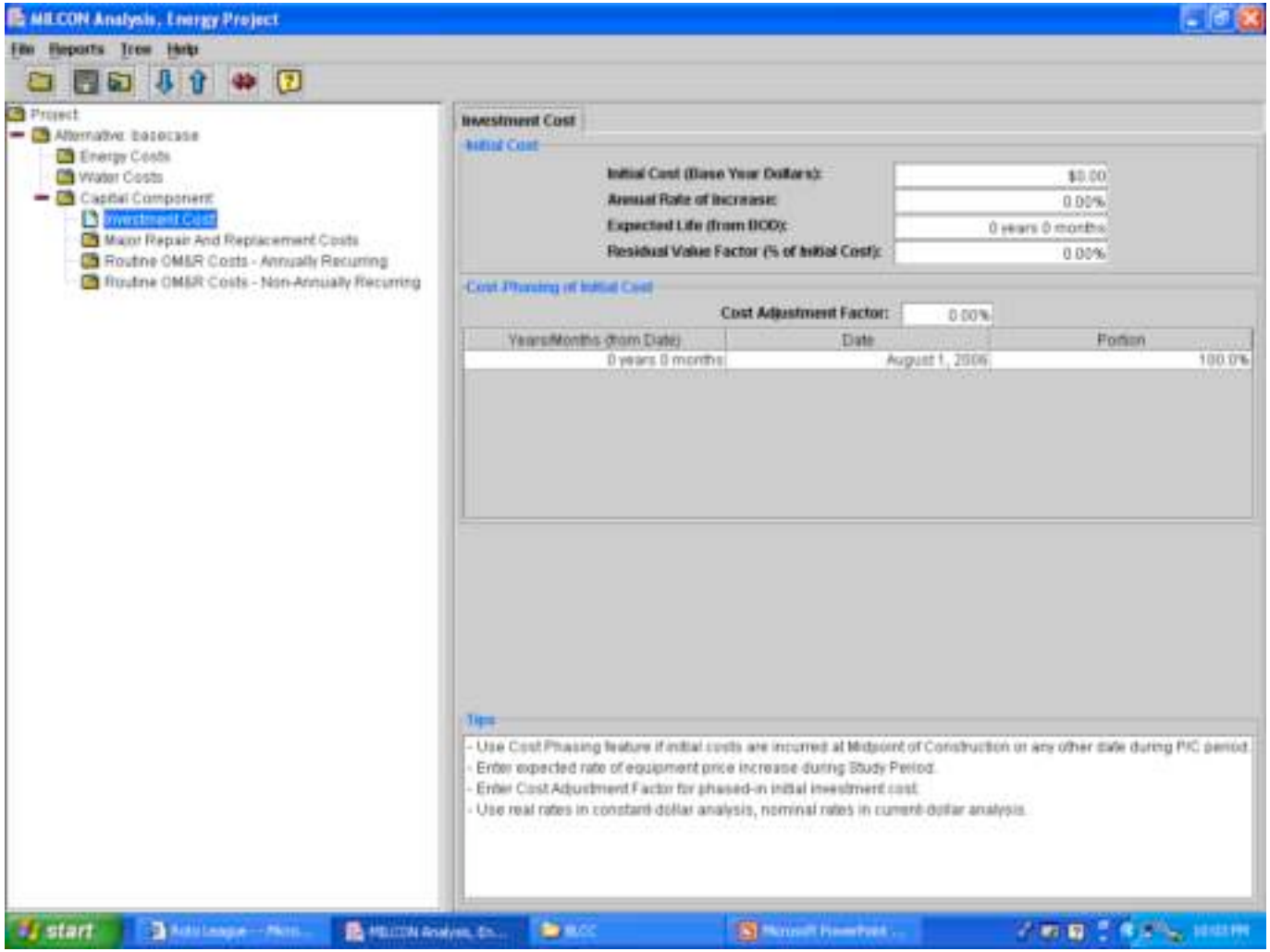


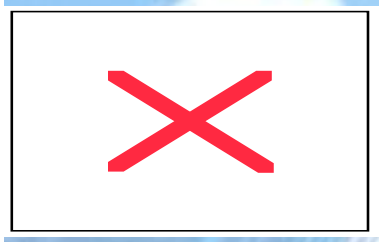
Other Modules

MILCON Analysis: Energy Project

1. **Operational costs and replacement costs are timed from Beneficial Occupancy Date**
2. **Length of Study Period includes Planning/Construction/Installation Period and Beneficial Occupancy Period (Service Period)**
3. **Beneficial Occupancy Period cannot exceed 25 years for energy or water conservation or renewable energy project.**

MILCON Analysis: Energy Project

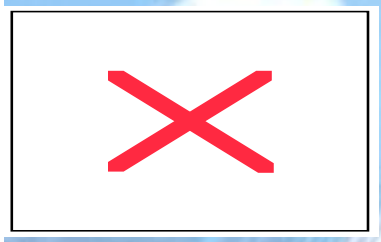




Other Modules

MILCON Analysis: ECIP Project

1. **For New Construction**
2. **Enter the differences in construction cost, SIOH and design cost for alternative relative to base case.**
3. **Suggested default for SIOH is 6%, for Design Cost 10% of construction cost.**
4. **Enter all added/reduced recurring costs**



Other Modules

MILCON Analysis: Non-Energy Project

1. **Length of Study Period includes Planning/Construction/Installation Period and Beneficial Occupancy Period (Service Period).**
2. **Beneficial Occupancy Period cannot exceed 25 years for energy or water conservation or renewable energy project.**
3. **Operational costs and replacement costs are timed from Beneficial Occupancy Date**
4. **OMB discount rates apply to MILCON design projects that are not primarily energy or water conservation projects.**
    1. ***HELP - Performing OMB Analyses - 2005 OMB Discount Rates.***

BLCC Walk-through