



# ENERGY SOLUTIONS



**Southern California Edison  
DCE Process  
Community Engagement Panel  
7/17/14**



# Decommissioning Cost Estimate



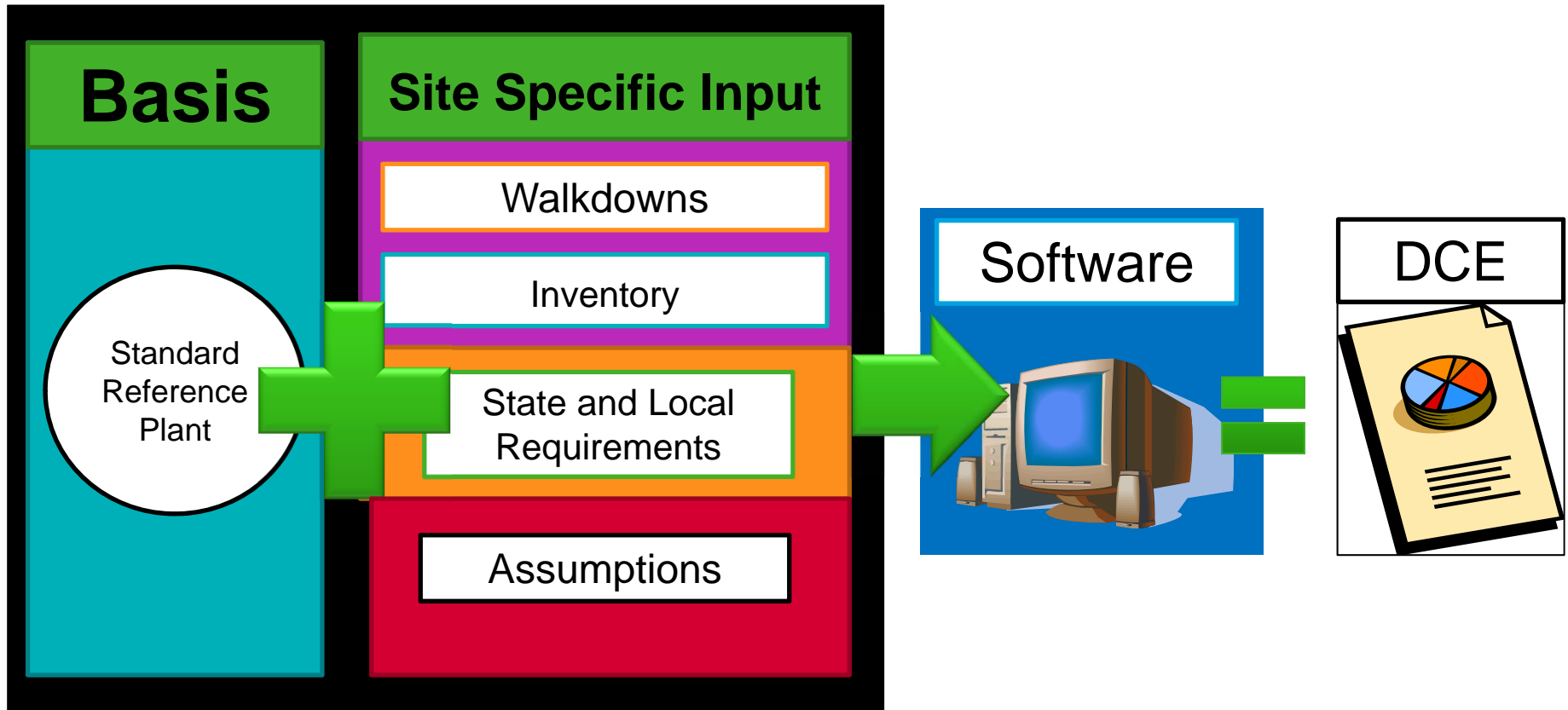
## Basis

- 10CFR50.75(c), 10CFR72.30, 10CFR50.54(bb)
- EnergySolutions estimating model and data
- SONGS specific material inventory data

## Structure

- Based upon Selected Decommissioning Approach
- Reports Cost by Regulatory Requirements for
  - License Termination
  - Spent Fuel Management
  - Site Restoration
- Period Specific Costs Organized by Distributed and Undistributed
  - Distributed - scheduled activities
  - Undistributed - time and period dependent costs
- Demonstrates Adequacy of Available Funding

# Estimate Development Process



## Developed Using *EnergySolutions*' Methodology

- Proprietary decommissioning cost model used successfully since 1985
- Based on Atomic Industrial Forum (AIF) guidelines and NRC Regulatory Guide 1.202 standard format and content
- Well-defined site-specific engineering analysis
- Applies both detailed engineering calculations for activity costs and Unit Cost Factors (UCFs)
- UCFs are economic parameters developed to express costs per unit of work for removal of materials
- Costs calculated as either Distributed or Undistributed

- Determination of decommissioning strategy and technical approach
- Development of Work Breakdown Structure (WBS) to implement the strategy and approach
- WBS organized to report cost by regulatory requirement
  - License Termination 50.75(c)
  - Spent Fuel Management 50.54(bb)
  - Site restoration
- Development of project schedule organized into decommissioning periods by WBS

## Site Specific Inventory Data

- Material inventory developed from:
  - Existing inventory data from prior estimates
  - Compilation of plant system data from SONGS data base to validate and supplement prior inventory
  - Material quantity inventory from:
    - License Documents
    - Structural Drawings
    - Major Component Drawings
    - Piping Drawings
    - Radiological Records

## Site Specific Undistributed Period Costs

- SCE Furnished Cost Basis for:
  - Actual Decommissioning Expenditures Incurred
  - Utility Staff Costs
  - Emergency Preparedness and FEMA Fees
  - Regulatory Fees
  - Property Taxes
  - Insurance
  - Materials and Services
  - Miscellaneous Operating Costs
  - Energy

## Spent Fuel Management Cost and Schedule Development

- Decommissioning schedule constrained by transfer of spent fuel to the ISFSI
- SCE furnished the milestone dates for commencement and completion of the spent fuel transfer
- SCE also furnished the associated costs for spent fuel transfer



## Decommissioning and Site Restoration Cost and Schedule Development

- Majority of activities based on plant structure and inventory data by Unit Cost Factor
- Individual engineering calculations for more complex cost elements - e.g. reactor pressure vessel segmentation & packaging

- Produces a site specific Decommissioning Cost Estimate
- Organized to meet regulatory requirements
- Able to be revised as necessary