



RENOCELL[®] PERFORMANCE MODEL DESCRIPTION

Presented by:
Renovare International, Inc.

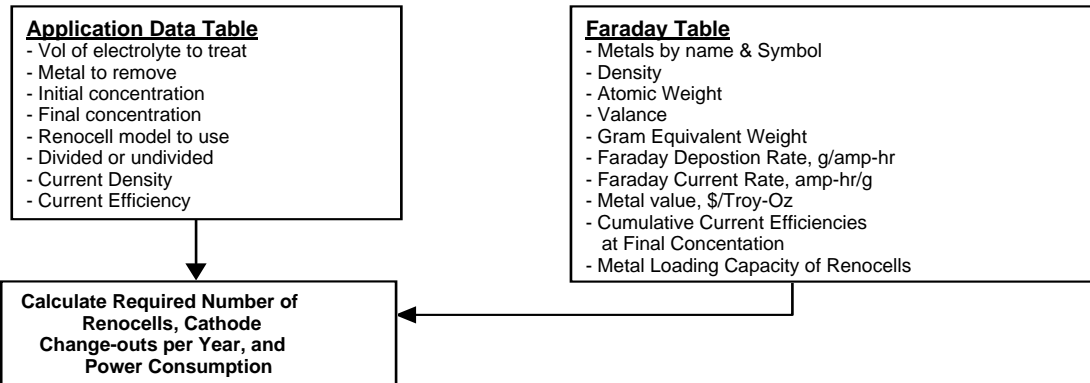
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RenoCell Performance Model

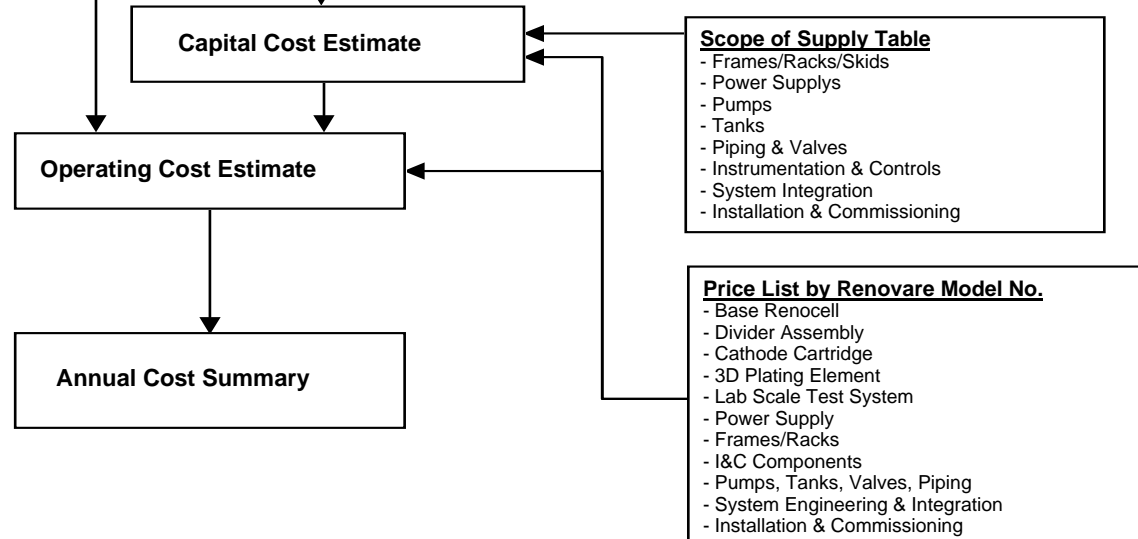
- Model is an MS Excel Workbook
- For a Specified Application, the Model Provides Estimates of:
 - Number of RenoCells Required
 - Number of Cathode Change-outs Required
 - Power Consumption
 - Capital and Operating Costs (optional)

RENOCELL[®] PERFORMANCE MODEL

STANDARD INPUTS AND OUTPUTS



OPTIONAL INPUTS AND OUTPUT



JRII-8011-0

Basic and Mandatory Input Application Operating Parameters

- Identification of metal to remove or recover
- Flow rate of electrolyte
- Initial metal concentration
- Final or Target metal concentration
- RenoCell Model
- Divided or Undivided
- Current Density
- Current Efficiency
 - Manual input, or
 - For selected metals - auto lookup based on final concentration
- Cathode Re-use Frequency

Optional Input - Scope of System Supply

- Frame/Rack/Skid(s)
- Power Supply(s)
- Pump(s)
- Tank(s)
- Pipe & Valve(s)
- Instrumentation & Controls
- System Integration
- Installation & Commissioning

Basic Outputs from Model

- Number of RenoCells
- Gross Capacities
 - Volume of electrolyte processed
 - Mass of metal removed
 - Power consumption
- Number of Cathode Change-outs per Year

Optional Output

- Capital Cost Estimate
 - RenoCell(s)
 - System components
- Operating Cost Estimate
 - Electric power
 - Parts & labor for cathode change-outs
 - Maintenance costs (% of Capital Cost)
- Annual Summary Cost Estimate
 - Operating Cost
 - Annualized Capital Cost
 - Cost - Benefit Metrics
 - » \$/lb, \$/TOz, \$/kg, \$/1000 gal, \$/1000 liter