The Need for "CUM" in Material Process Technologies

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Table of Content

- The modeling problem
- The interim solution
- Proposed solution
- Application for other technologies

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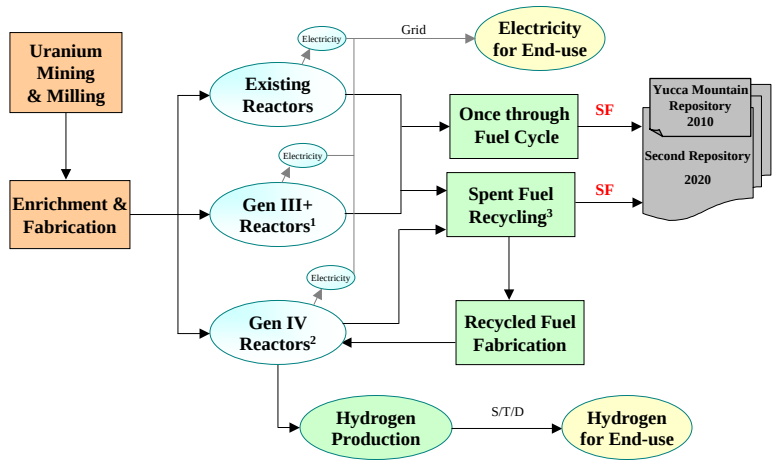
The Modeling Problem (1): Integrated Nuclear Energy System



Notes:
1. Gen III+ Technologies Covered: ABWR, ESBWR and AP1000
2. Gen IV Technologies Covered: SFR, VHTR, GFR, MSR, SCWR, and LFR
3. AFCI Technologies Covered: UREX+, UREX/PYRO, PYROX, and Advanced Aqueous Process with ACP/UREX+

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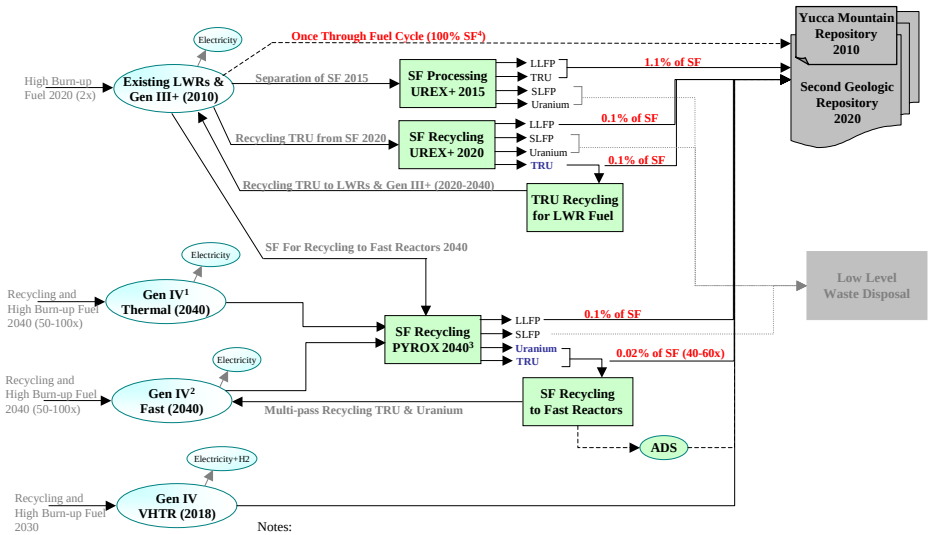
The Modeling Problem (2): Material Flows in Nuclear Technologies



Notes:
1. Gen IV Thermal Technologies Covered: SCWR and MSR
2. Gen IV Thermal Technologies Covered: SFR, GFR, and LFR
3. Includes Molten Coolant Salt Processing & Advanced Aqueous Process with ACP/UREX+
4. Spent Fuel

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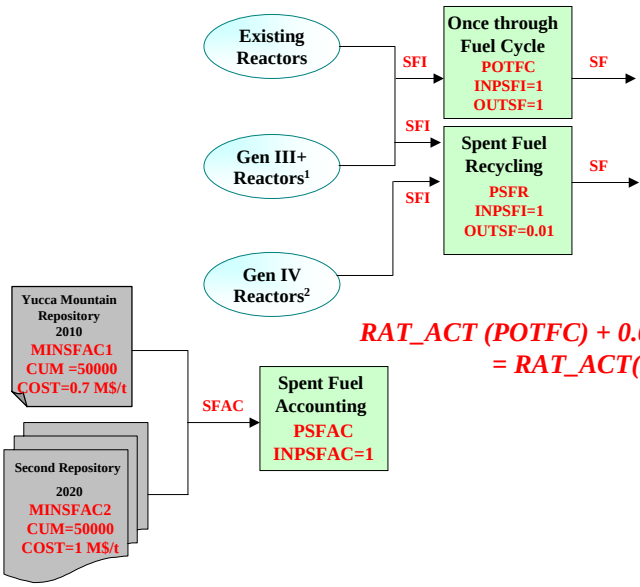
The Interim Solution: Modeling Nuclear Spent Fuel 2010 - 2050



RAT_ACT (POTFC) + 0.01RAT_ACT(PSFR) = RAT_ACT(PSFAC)

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Proposed Solution within ANSWER and Application in Other Technologies

Proposed solution: Add the CUM parameter (cumulative maximum of INP(MAT) to material flow technologies (PRW, PRV)

Other applications: Landfills and Carbon Storage

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