

# Project Selection and Benefits Analysis

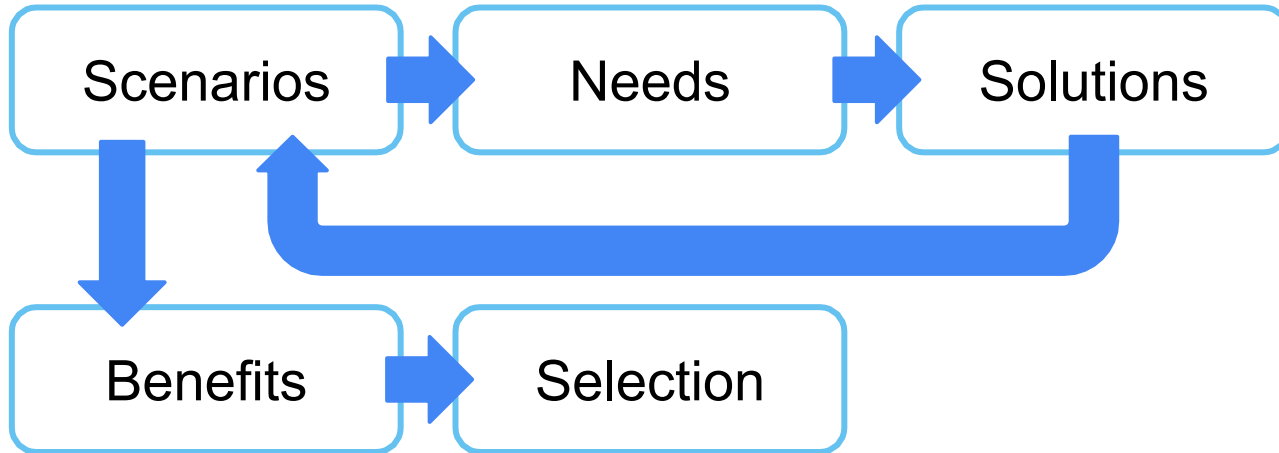
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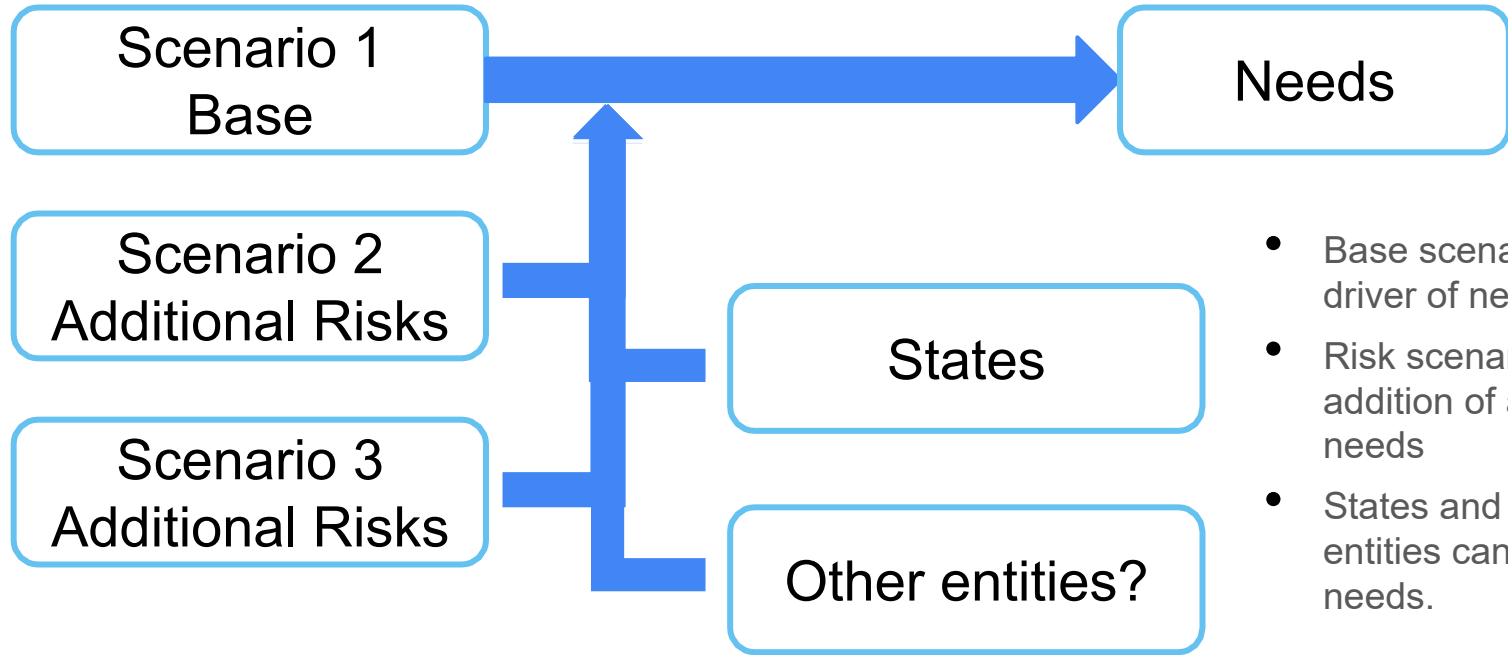
# Key Recommendations

1. There must be a PJM-led selection process. That appears to be the only way to reliably get the right transmission built.
2. Needs and benefits analysis should be stochastic and align as closely as practical with the RPM approach.
3. A portfolio approach is probably best for managing uncertainty, risk, and political sustainability.

# Scenario Use for Benefits and Selection



# Identifying Needs



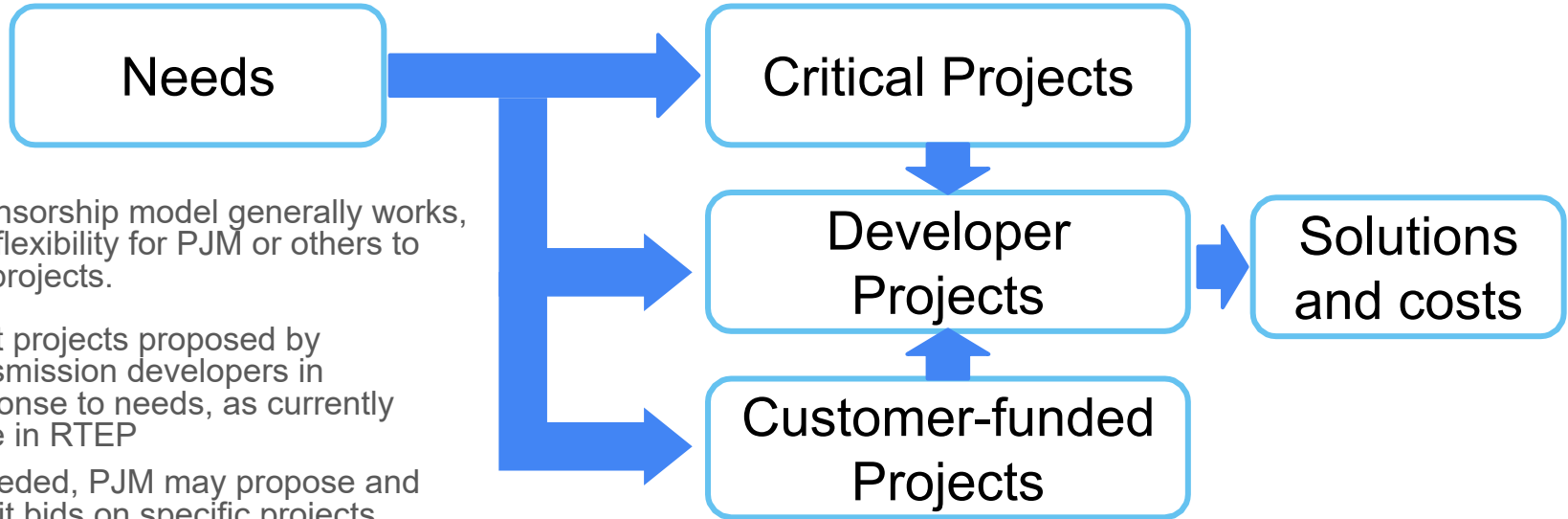
- Base scenario is primary driver of needs.
- Risk scenarios inform addition of additional needs
- States and possible other entities can specify further needs.



# Need Considerations

1. Reliability and congestion needs identified through modeling of scenarios.
2. This modeling should look at a wide variety of conditions within each scenario, similar to how RPM handles weather/load cases. This inherently addresses at least some extreme weather issues.
3. All needs identified in the base case should be addressed, while staff judgement will be needed to determine how to handle risk case needs.

# Finding Candidate Solutions



The sponsorship model generally works, but add flexibility for PJM or others to identify projects.

- Most projects proposed by transmission developers in response to needs, as currently done in RTEP
- If needed, PJM may propose and solicit bids on specific projects
- States and possibly other third parties may also sponsor projects
- All projects ultimately specified through bids, as in RTEP, then evaluated as portfolios.

Lot of flexibility here—important thing is that needs are met, room for creative solutions, and accurate costs.

# Benefits Evaluation

1. Order 1920 requires benefits be calculated for all scenarios.
2. The heart of benefits calculation should be fine-grained production cost/resource adequacy modeling. Ideally, models will run many cases for each scenario, as in RPM.
3. If models include capacity and scarcity pricing, reliability benefits are included, addressing FERC items 2, 3, and 6.
4. Benefit 1 (avoided or deferred tx investment) implies that PJM (a) estimates costs of EOL projects; (b) has authority to deem EOL and other supplemental projects unnecessary.



# Portfolio Selection

We believe a portfolio approach is superior to recommending individual projects:

- Better suited to managing risk across multiple scenarios
- Has proven more politically sustainable
- May identify benefits not visible in single project analysis



# Portfolio Selection

1. At a minimum, portfolios must meet 1-in-10 and NERC requirements for the base scenario.
2. PJM discretion needed to determine additional ‘must have’ reliability needs.
3. If no minimum reliability portfolio can be assembled from submitted solutions, PJM must identify additional needs and return to the solution identification phase.
4. This portfolio becomes the base case for benefit/cost analysis of additional projects.
5. Assembling portfolios will be an exercise in judgement that considers C/B ratios in all scenarios. However, projects may fail the ratio test in specific scenarios so long as (a) their contribution to the portfolio as a whole justifies inclusion and (b) the portfolio’s C/B ratio remains adequate in all scenarios

