Interconnection Process Reform Recommendations

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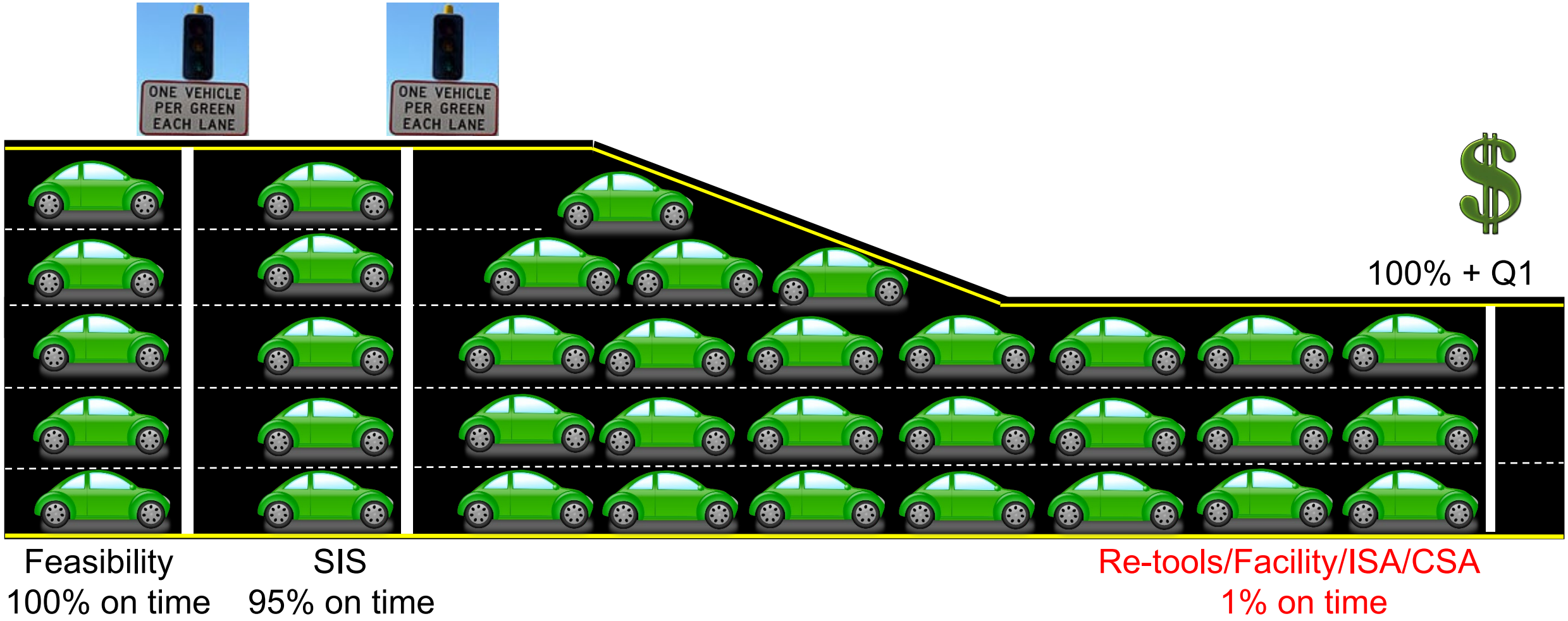
PJM Interconnection Process Workshop 2

codensa

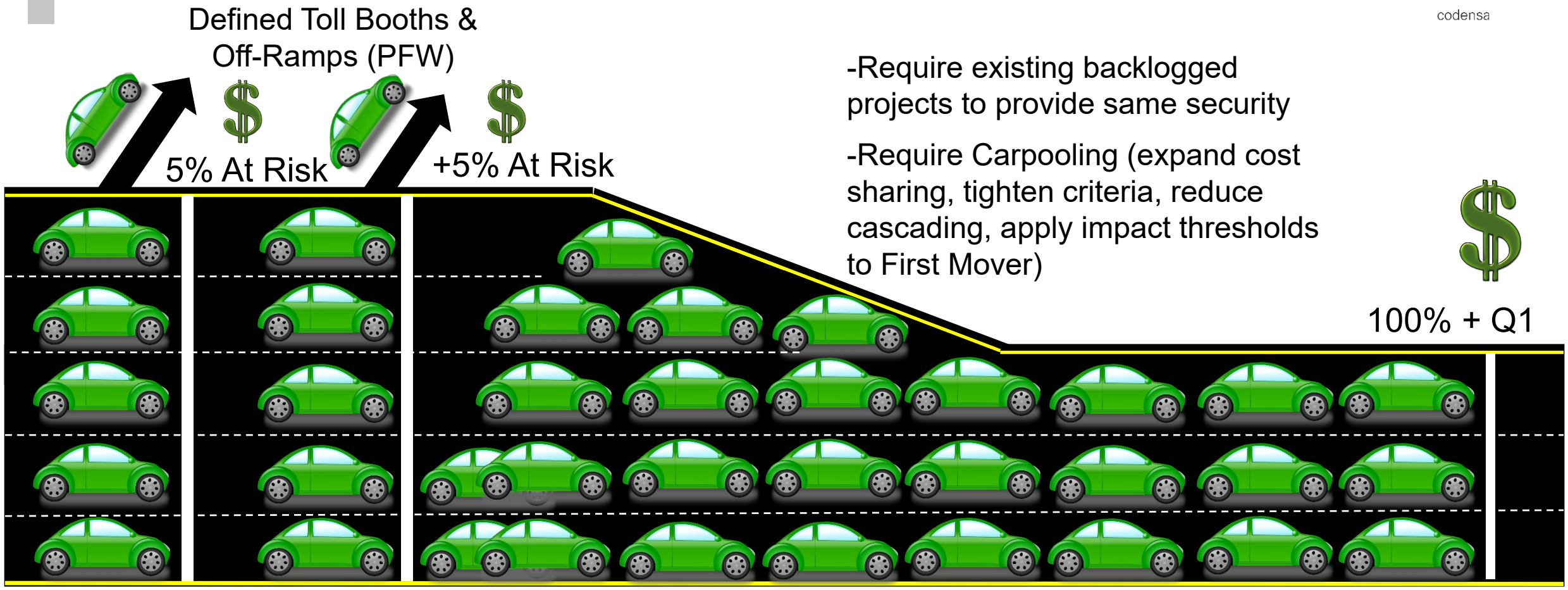
It Takes All of Us

- Inefficient processes and delays in re-tools and facility studies have resulted in a huge backlog
- Cost and schedule uncertainty prevents reasonable assurance for project investments and causes unrealistic results for new queue entrants
- Increased requirements in other RTOs demonstrate that adding at-risk capital and making queue processes harder does not produce faster queue process without TO and RTO concessions and improvements
- As a developer, we can accept a riskier process *provided* we get a clear commitment from PJM and TOs to streamlining/shortening their processes

Identifying the Bottleneck



Alleviating the Bottleneck



-Require existing backlogged projects to provide same security

-Require Carpooling (expand cost sharing, tighten criteria, reduce cascading, apply impact thresholds to First Mover)

New Wipers: SIS-quality Feasibility & Planned Re-tools, Affected System Studies Required during SIS

Improve Road Readiness Checks (site control, reduce multi-IR projects)

Minimum Speed Limit:
-Efficiencies, add staff, and commitment to facility study deadlines
-Single IA, allow operations under Interim ISA

Summary of Key Recommendations

1. Ensure generation projects are ready to enter queue to reduce workload on PJM and TOs
2. PJM upgrade feasibility study to SIS quality. SIS becomes scheduled re-tool. Add re-tool upon facility study entry also
3. PJM require at-risk security payment(s) from ICs, including retroactively
4. PJM improve cost allocation rules to reduce cascading upgrades, improve certainty of reimbursement, and allow minimal contributors to move forward unhindered
5. PJM and TOs identify efficiencies, add staff, and commit to on-schedule facility studies. Consider penalties for study report delays
6. Streamline ISA/CSA documents and negotiation between PJM, TOs and ICs
7. Allow operation under Interim ISA. Improve interim rights and modification processes

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Detailed Recommendations

Road Readiness: Ensure projects are ready to enter queue to reduce queue volume

Problem	Solutions
• PJM is experiencing a growing number of applications in each queue window, making the processing of the queue less manageable • Inconsistently applied threshold requirements for entering the queue • Multiple queue positions for single plant (13.5% of AG1 GIRs have POI matching a prior AG1 POI), projects fall under cost allocation minimum thresholds	• Increase requirements (e.g. higher site control requirement where regionally appropriate) on projects to ensure proper, timely entry • Do not allow multiple queue positions per IC in same New Service Queue with same fuel type and POI substation/line unless project exceeds minimum size requirement (e.g. 200 MW) • Select single POI before feasibility

Wipers/Toll Booth/Exit Ramps: Increase study accuracy and create decision points with financial commitment

Problem	Solutions

• Feasibility study is inaccurate as commercial probabilities are assumed that influence loading and cost allocation is not performed
• The study consumes significant staff time without producing binding results.
• Low commitment results in lingering
• Re-tools are not completed in a timely way to allow projects to move forward
	• Perform SIS level study during feasibility stage
	  • SIS becomes first re-tool
	  • Add re-tool upon facility study entry
	• Require Affected System studies during SIS
	• Require two 5% at-risk security payments (based on PJM upgrades) after feasibility and SIS to encourage timely withdrawal and create structured re-tool timeline
	  • Include penalty free withdrawal for significant cost increases from PJM or Affected Systems
	  • Apply 10% security retroactively to backlogged projects without ISA, create sequenced security payment/re-tool plan to clear dormant projects
	• Find efficiencies to help small projects progress quickly

Increase Carpooling: Refine cost allocation rules to reduce cascading upgrades, re-tools, and free riders

Problem	Solutions

• First Mover concept assigns high costs to single projects with low probability of reimbursement, creating high withdrawal rate
• Large upgrades cascade serially through queue, creating backlog as re-tools, updated facility studies, and ISAs are completed one withdrawal at a time prior to security commitments from new first mover
	• Simplify cost allocation by eliminating $5M threshold
	  • Share all upgrade costs between First Mover and subsequent contributors within queue
	  • All upgrades also eligible for refund from future queues
	• Tighten and simplify cost allocation thresholds to spread out costs
	  • Increases reimbursement probability
	  • Maintain non-zero threshold for small projects
	  • Apply same criteria to first mover (allows minimally impacting projects to proceed)

Minimum Speed Limit (1): Shorten Facility Study delays through reduced volume and study efficiencies

Problem	Solutions

• Facility studies are currently averaging a completion time of 2 years, only 1% being completed within 90-day tariff requirement
• Generation project cannot begin operation without the completion of a facility study and subsequent ISA. Delays result in business uncertainty, increased costs and lost opportunity to qualify for federal tax incentives
	• Two 5% at-risk security payments prior to facility study reduces volume of facility studies and ISAs drafted, especially studies of large upgrades
	• PJM and TOs must commit to timeliness in exchange for ICs accepting additional risk
	  • E.g. Facility study cost billed to IC discounted by 5% for every 5 days late
	• Perform group studies for dynamic stability
	• Post the facility study immediately upon completion by utility
	  • Set separate deadline for PJM to draft ISA

Minimum Speed Limit (2): Streamline ISA/CSA documents and negotiation

Problem	Solutions
• PJM is unique in that there are multiple, sequenced interconnection agreements • Utilities are not engaged in negotiation of some of these agreements which leads to confusion about schedule milestones • As a result of the bottlenecks and growing queue backlog, queued projects with Interim ISAs may be ready to begin operations before PJM has issued the final ISA	• Add specialized PJM staff dedicated to drafting and negotiating ISAs • Combine the ISA and CSA into a single agreement • All parties at table for ISA/CSA negotiation, remove PJM as middleman • Move older projects through ISA execution and security posting to clear backlog

Minimum Speed Limit (3): Interim and Modification Process Improvements

Problem	Solutions
• As a result of the bottlenecks and growing queue backlog, queued projects with Interim ISAs may be ready to begin operations before PJM has issued the final ISA • Timing to enter studies for Interim Rights are not documented • Lack of barrier to entry for Interim Rights studies results in a “see what sticks” mentality rather than realistic consideration of project schedules. May result in reduced injection rights • Modification studies taking 9-12 months	• Allow operation under Interim ISA (consistent with Order 845 requirement for Provisional Interconnection Agreement) • Post schedule for entry into studies for interim rights • Add small fee ($10k?) for interim study entry to force ICs to gain consensus internal decision about entering • Add staff and/or consultants to improve modification study timeline