JTC Freight Investment Study
Third Policy Group Meeting

presented to

Joint Transportation Committee Policy Group

presented by

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1. Welcome & Opening Remarks

1. Introductions and Opening Remarks — 3 min
2. Synopsis of Diversion Analysis — 40 min
   - Purpose of the analysis
   - Elasticity results
   - Stakeholder comments
3. Cargo User Fee Revenue Forecast — 25 min
4. Funding of Candidate Freight Projects — 60 min
   - Identified Freight projects & costs
   - Classification of projects according to nexus with cargo user fees
   - Illustration of three selected projects
5. Next Steps & Future Meetings — 15 min
6. Adjournment

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2. Synopsis of Diversion Analysis

- Purpose of the analysis
- Elasticity results
- Stakeholder comments

Synopsis of Diversion Analysis
Dr. Robert Leachman

- **Goal of the analysis**
  - Estimate impact of user fees on import volumes
- **Question**
  - What level of fee would induce diversion to other ports
- **Analysis tool**
  - Long-run elasticity model
- **Conclusion**
  - Fees at the low end of the range ($30) would cause significant diversion to other ports

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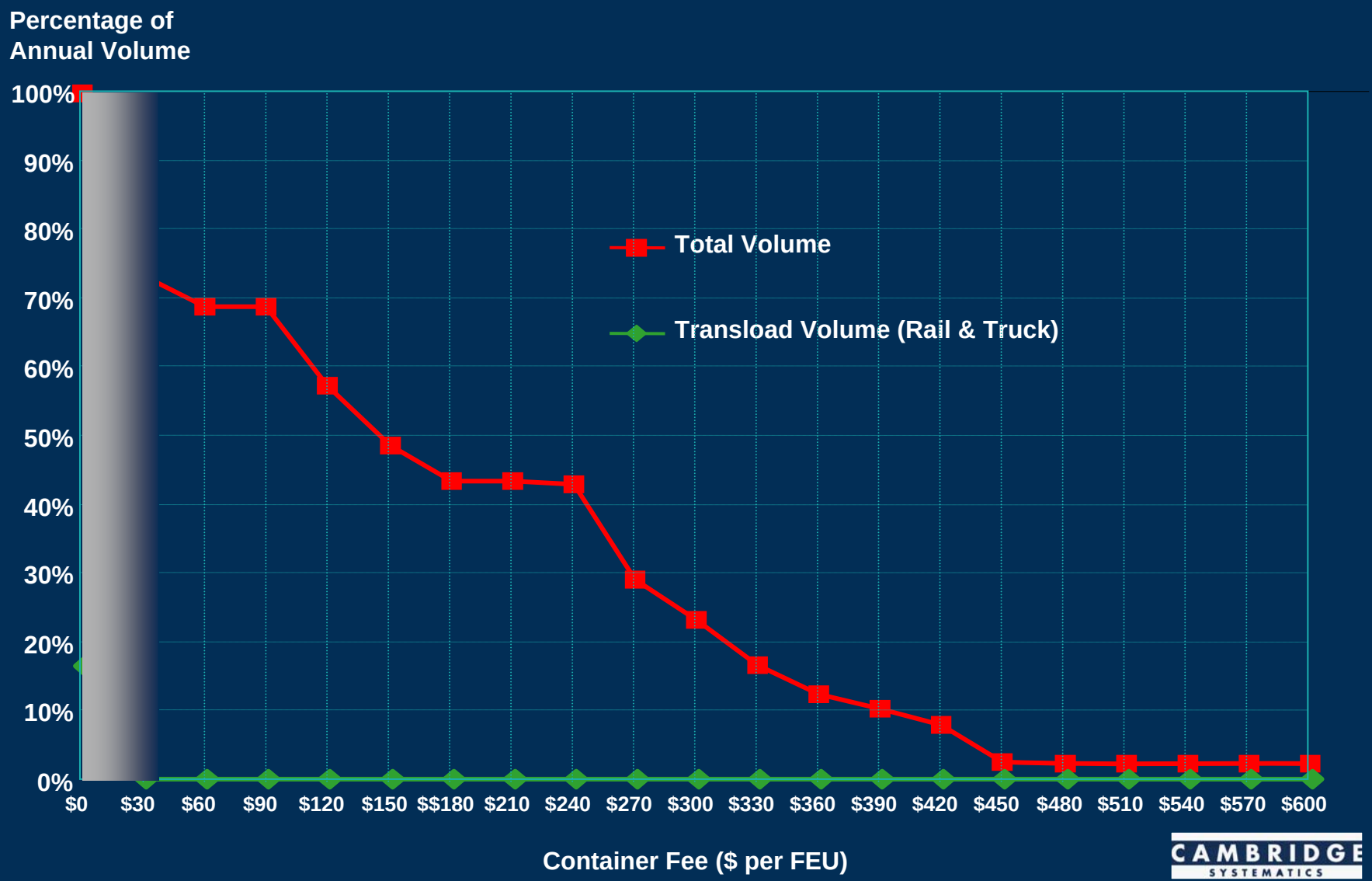
Limitations of the analysis

- **Static long-run elasticity model**
  - **Does not account for short-term impedances (e.g., contracts)**
  - **Does not account for possible changes in competitive forces (e.g., development of Mexican ports)**
- **Focus on imports from Asia (about 1/3 of volumes).**
  - **Does not include exports, empties, non-Asia cargo**
- **Not sensitive to fees below $30 per FEU**

Limitations of the Analysis (Continued)

- Model not used to test for effect of ongoing congestion at Seattle and Tacoma and competitor ports
- Model not used to test for effect of infrastructure improvements at Seattle and Tacoma
  - i.e., projects funded with fee revenues
- Model not used to test for effect of customs duties in Canada and Mexico
- Not sensitive to benefits of diversification of risk

Initial Findings (Continued)
Response of PNW Imports to Potential Container Fee



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BST Associates Follow-Up
Paul Sorenson

- Impact of fee on exports & empties not assessed; these are more sensitive to cost
- Planned capacity improvements at competitor ports not accounted for
  - e.g. new publicly-funded terminal at Prince Rupert
- Puget Sound ports have recently lost market share without imposition of user fees
- Bottom line: Leachman may be underestimating the extent of diversion

Comparison with Southern California Analysis

- Leachman conducted similar analysis for San Pedro Bay Ports
- Analysis included a “congestion relief” scenario
- Import volumes much more elastic with respect to congestion than with respect to container fees
- Without congestion relief, a $60/FEU fee would cut total import and transload volumes by 6%
- With congestion relief, a $200/FEU fee would cut total import volumes by 4% and *increase* transload volumes by 12.5%

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Stakeholder Comments on Analysis

- Stakeholders agreed with analysis results
- Leachman's findings borne out in their experience
  - Slim profit margins
  - Fierce competition
- Agreed with BST Associates that Leachman may be underestimating effects of diversion
- Freight has economic development benefits for the region
  - Public support for infrastructure, rather than industry fees, are warranted

Stakeholder Comments (Continued)

- Concerned that modeling focuses on comparisons to Ports of LA/Long Beach
  - International ports (Prince Rupert) also major competitor
- Concerned that even temporary imposition of a fee would cause irreversible damage
- Range of comments on tolling as an alternative
  - Ports view it as a more true system user fee; some others see it as another threat to the state's trade volumes

Bottom Line
Knowns and Unknowns

- **Knowns:**
  - **Imports into Puget Sound ports are highly elastic (unlike LA and Long Beach)**
  - **Fees greater than $30 will cause significant diversion**
- **Unknowns:**
  - **Impact of fees below $30**
  - **Impact of investing fees in congestion-relief**
  - **Relative value of diversification of risk**
  - **Impact of congestion-reduction investments at other ports**

3. Cargo User Fee Revenue Forecast

Option 1
Re-direct freight-related revenues to freight-only projects

Option 2
Raise existing taxes or fees

- Freight specific
- Non-freight specific

Option 3
Implement new taxes or fees

- Freight specific
- Non-freight specific

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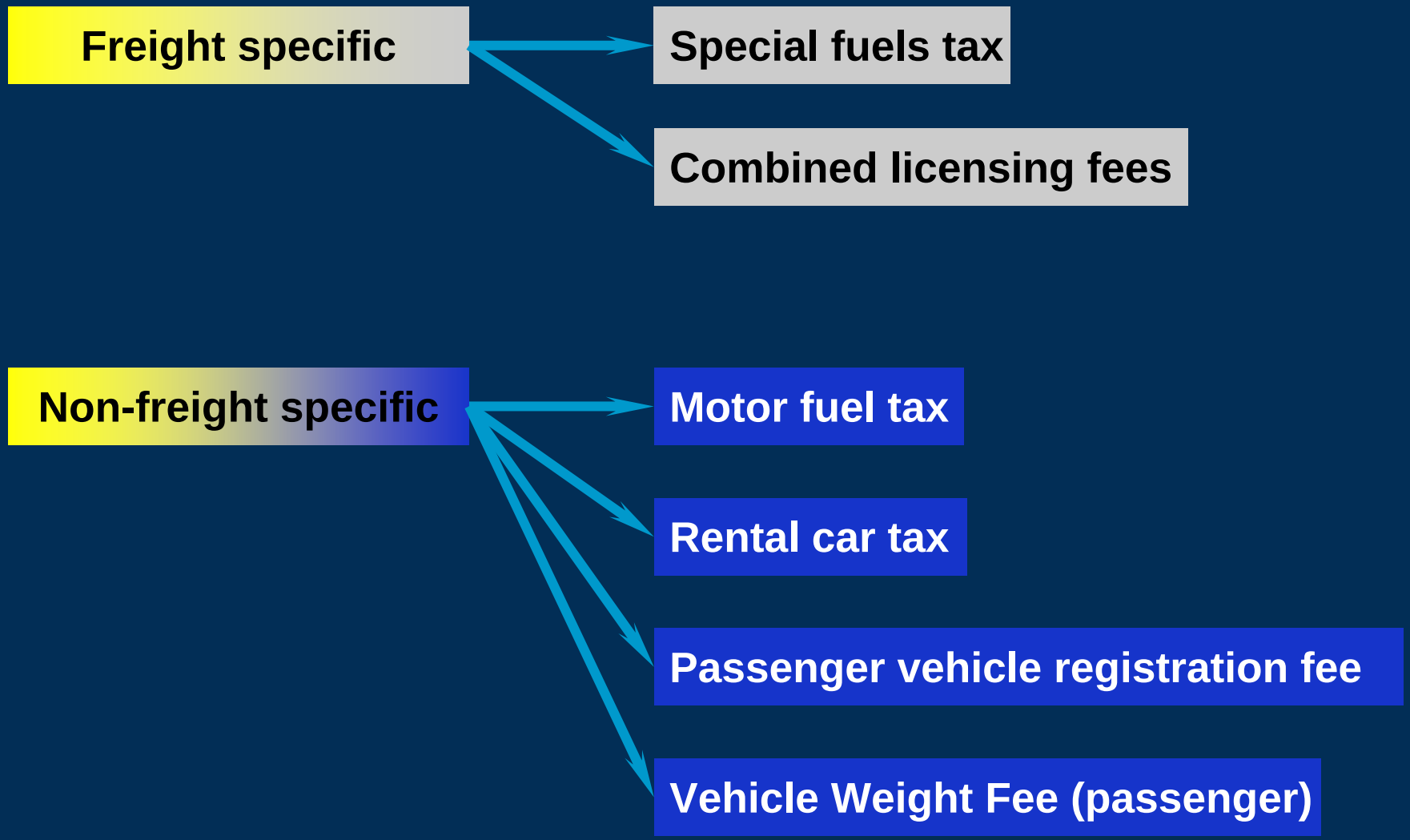
Re-direct Freight-related Revenues
Freight-only Projects

Option 1

- **Special fuel tax, combined licensing fees**
  - **>$360 million annually**
  - **18th Amendment limits use for non-highway purposes**
- **Public Utility Taxes?**
- **General fund revenues**
  - **G.O. Bonds funded with Special Fuels tax**
  - **California I-Bond**

Raise/Index Existing Taxes or Fees
From Freight-Only and Non-Freight Sources

Option 2



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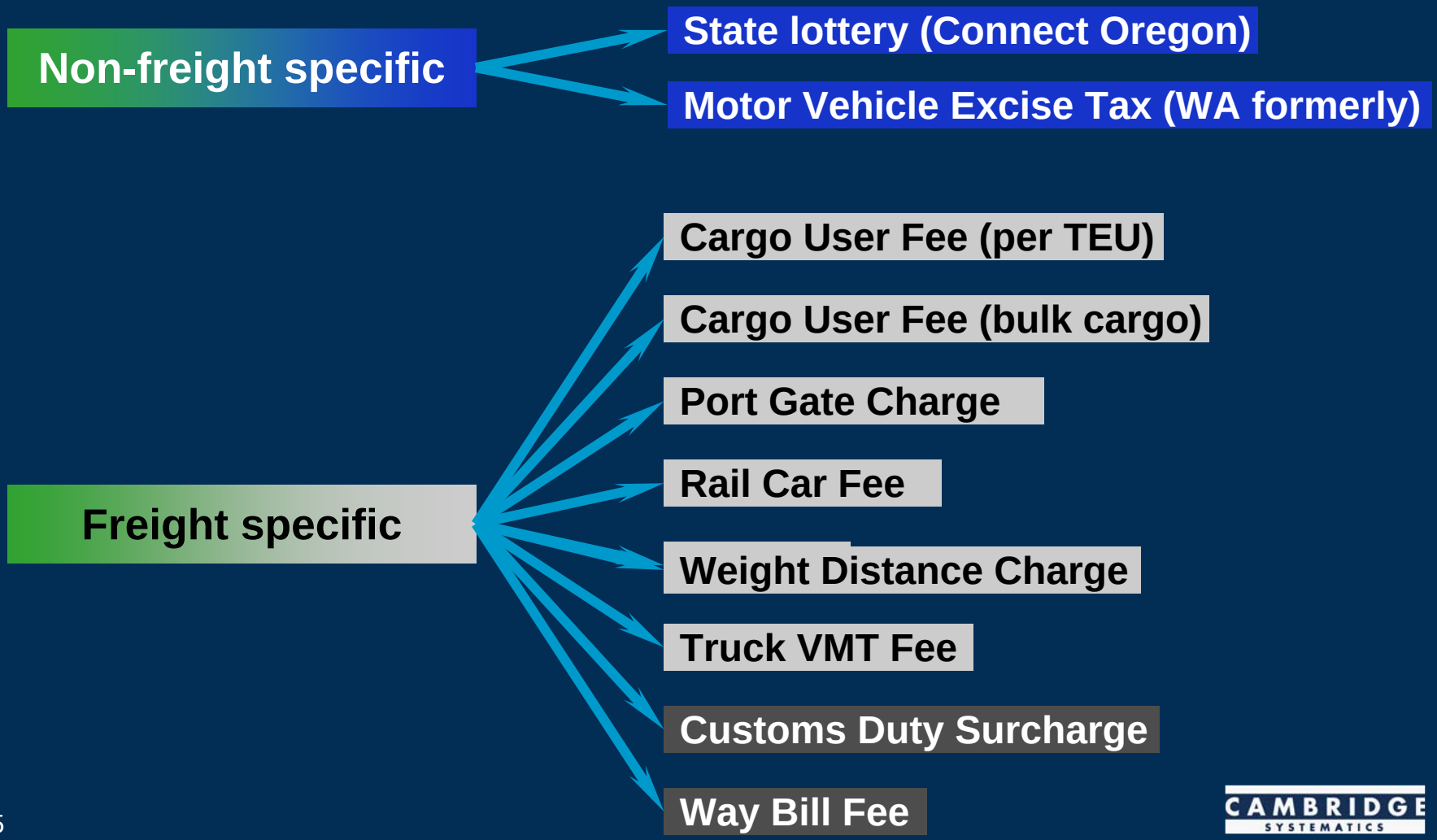
Implement New Taxes or Fees
From Freight-Only and Non-Freight Sources

Option 3



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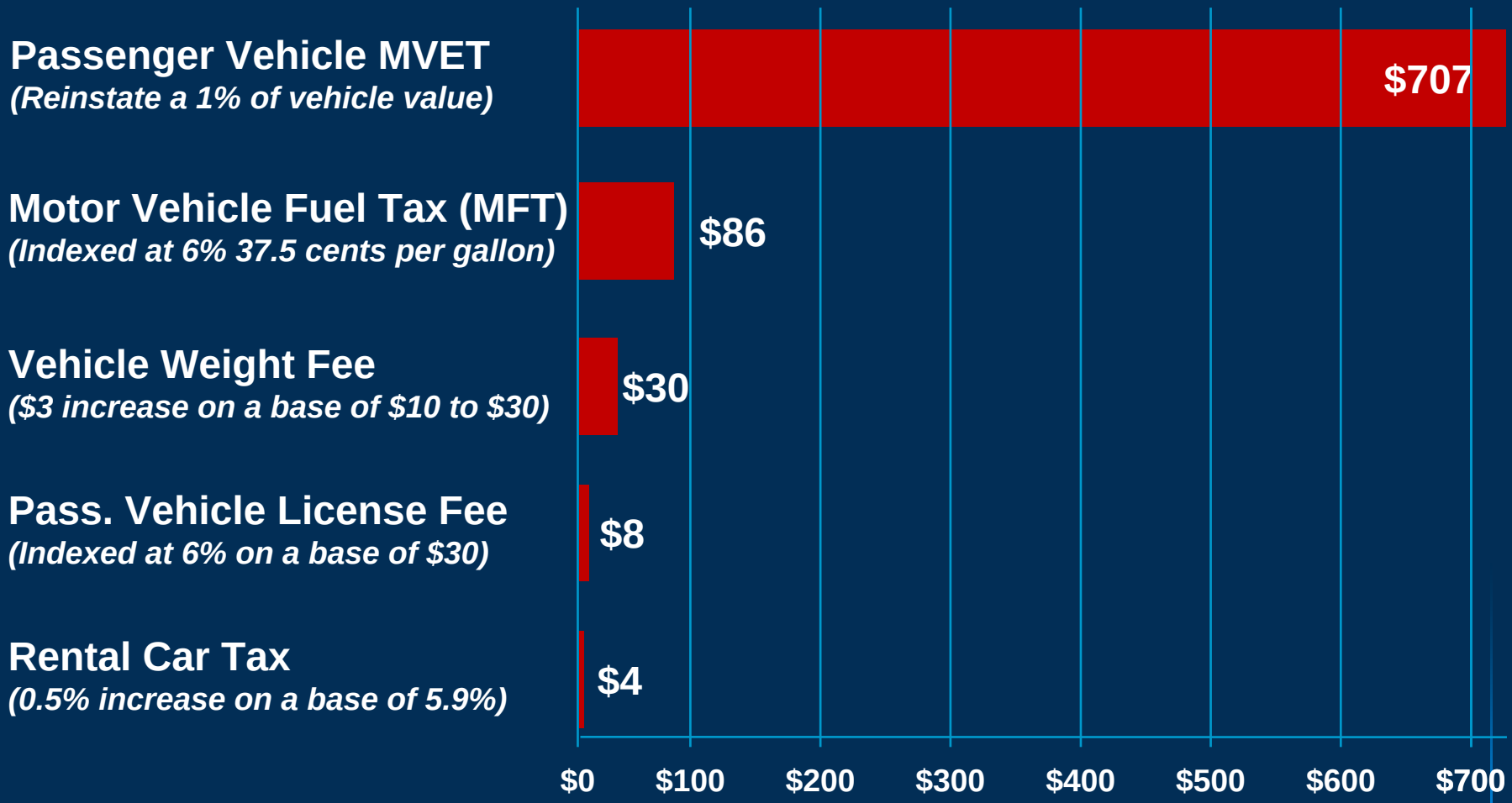
Increase in Non-Freight Related Sources
Biennium 2007-2009 (Millions of $2007)

Option 1



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Increase in Existing Freight Related Sources
Biennium 2007-2009 (Millions of $2007)

Option 2

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New Freight Related Revenue Sources
Biennium 2007-2009 (Millions of $2007)

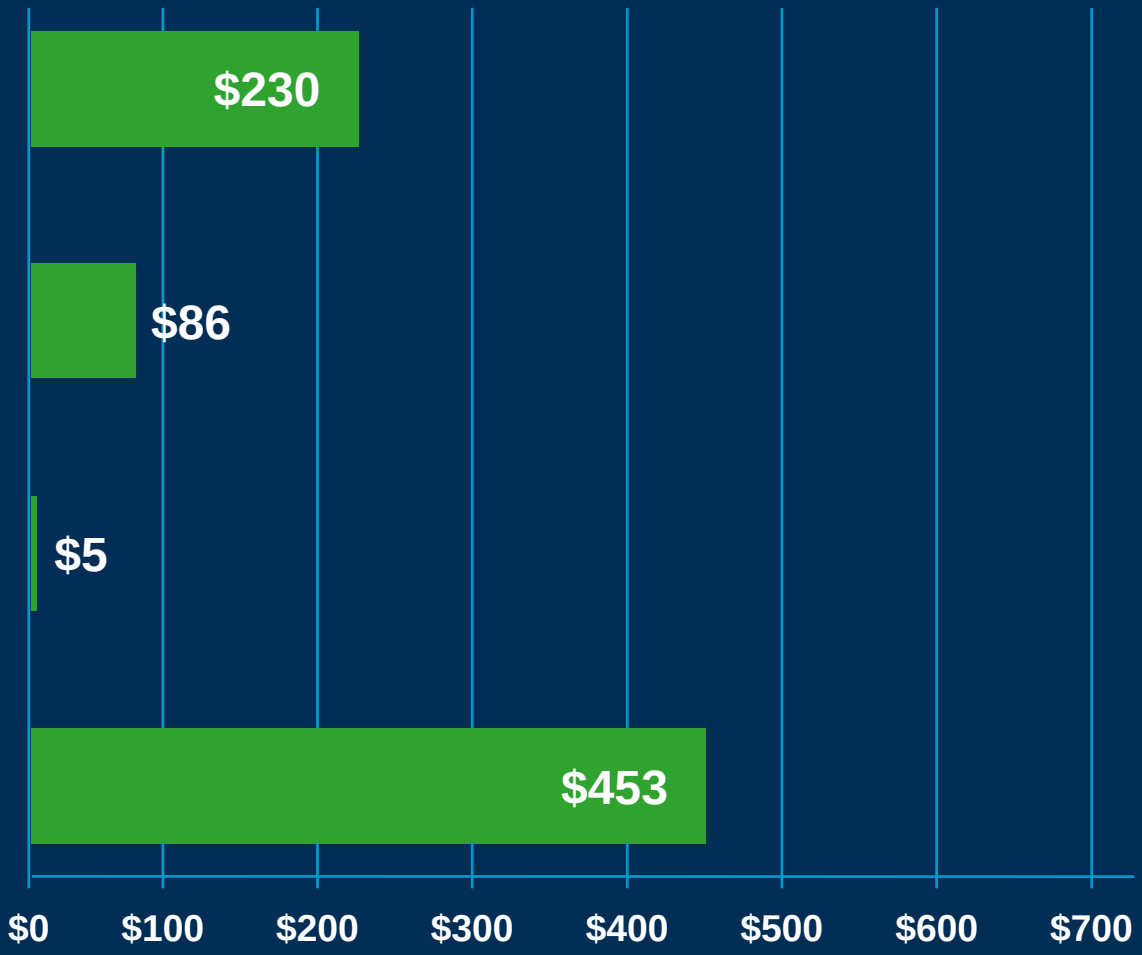
Option 3

MVET from Trucking
(Reinstate a 1% of vehicle value)

Cargo User Fee on Imports
($30/TEU)

Bulk Fee
($0.20/Ton)

Heavy Truck VMT Fee
(16 cents per mile)*



Note: *Truck VMT rate same as Germany

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4. Funding of Candidate Freight Projects

- Identified freight projects & costs
- Classification of projects according to nexus with cargo user fees
- Illustration of three projects
  - Funding needs
  - Appropriateness of container fee funding
  - Alternative toll, tax & fee sources

Funding of Candidate Freight Projects
Identified Freight Projects

- Legislative Budget
- FMSIB and FAST
- Regional Blueprint

Identified Freight Projects
Legislative Budget

- 29 projects
  - Excludes studies, rest areas, weigh station projects, minor pavement rehabilitation and spot safety projects
  - Projects with multiple phases are counted as one project
  - Does not include FMSIB projects, which are discussed separately
- 8 major highway projects
- 21 rail projects

Identified Freight Projects (Continued)
FMSIB and FAST

- **FMSIB**
  - 71 projects
  - Average cost of $72 million
  - 27 projects listed in legislative budget
- **FAST**
  - 16 projects
  - Costs range from $10 to $168 million per project *
  - $60 million average project cost

** Two projects have unknown costs.*

Identified Freight Projects (Continued)
Regional Blueprint

- 8 projects described as having freight benefits
- 5 projects with known costs:
  - SR 167 Tacoma to Puyallup $2,160 million
  - SR 509 South Access $1,350 million
  - Lander Street Overcrossing $152 million
  - Spokane Street Viaduct $157 million
  - South Park Bridge $160 million
- Total costs unknown for 3 projects
  - Combined RTID funding would have been ~$700 million

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Identified Freight Projects (Continued)
List Totals

- 26 projects appear on more than one list
- Total of 108 unique projects
- Total funding gap unknown, but very large
  - ~$2 billion gap for SR 167 Tacoma to Puyallup
  - ~$1 billion gap for SR 509
  - ~$800 million gap for 2nd Phase of I-90 / Snoqualmie Pass
  - Many smaller projects

Identified Freight Projects (Continued)
PSRC Quantitative Analysis of Selected Projects

- SR-509 corridor
- SR 167 corridor
- SR 520 corridor
- Bundled miscellaneous small projects:
  - Grade crossing
  - Intersections
  - Interchange
  - Detailed results will allow for apportionment of the benefits to each project based on the localized impacts

Identified Freight Projects (Continued)
PSRC Quantitative Analysis of Selected Projects

- **Travel time**
- **Reliability**
- **Truck operating cost**
- **Facility operating and maintenance cost**
- **Capital cost**
- **Accidents**
- **Emission costs**
- **Redundancy –** (freeway to arterial ratio or freeway to freight rail ratio)
- **Geographic equity**
- **Economic development –** (accessibility, measured by jobs within a certain time, to major freight generators like ports, intermodal terminals, manufacturing and warehouse/distribution centers)

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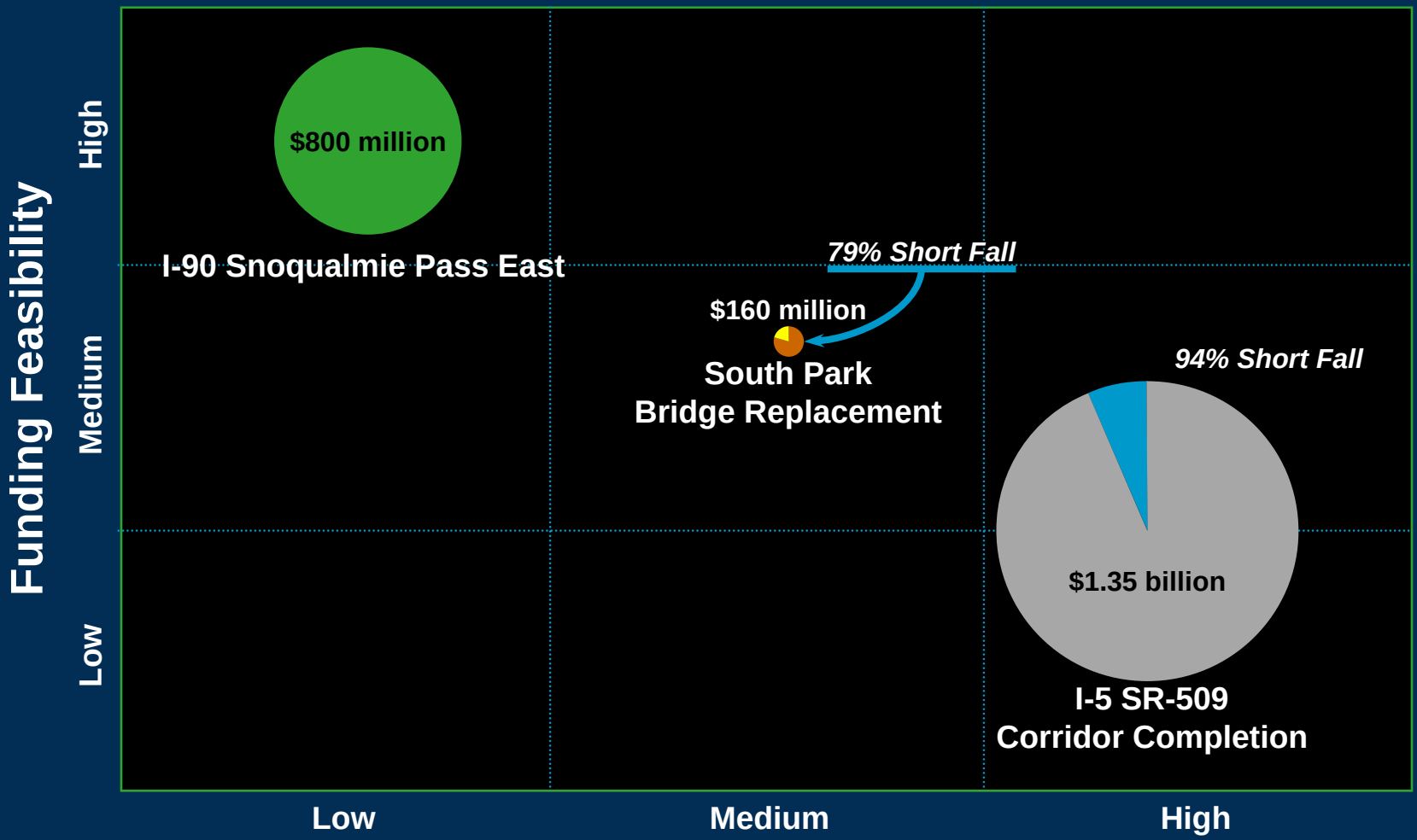
Three Illustrative Projects
Benefit Nexus vs. Funding Feasibility



Size corresponds to project cost

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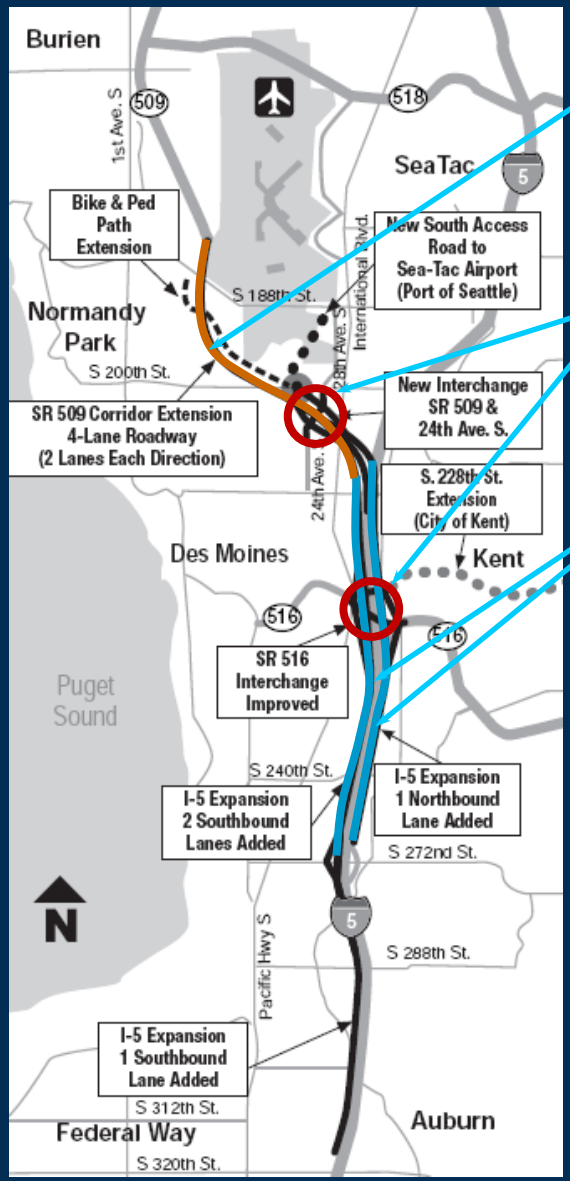
I-5/SR 509 Corridor Completion
Medium-High Nexus With Cargo User Fee



- Completes SR 509 corridor with three-plus miles of new freeway
- Includes new SR 509 interchange access
- Includes new lanes on I-5 between S. 210th and S. 272nd Street vicinity
- Listed as priority freight project in:
  - Legislative Budget
  - FMSIB List
  - Regional Blueprint (RTID)
  - WA Transportation Plan

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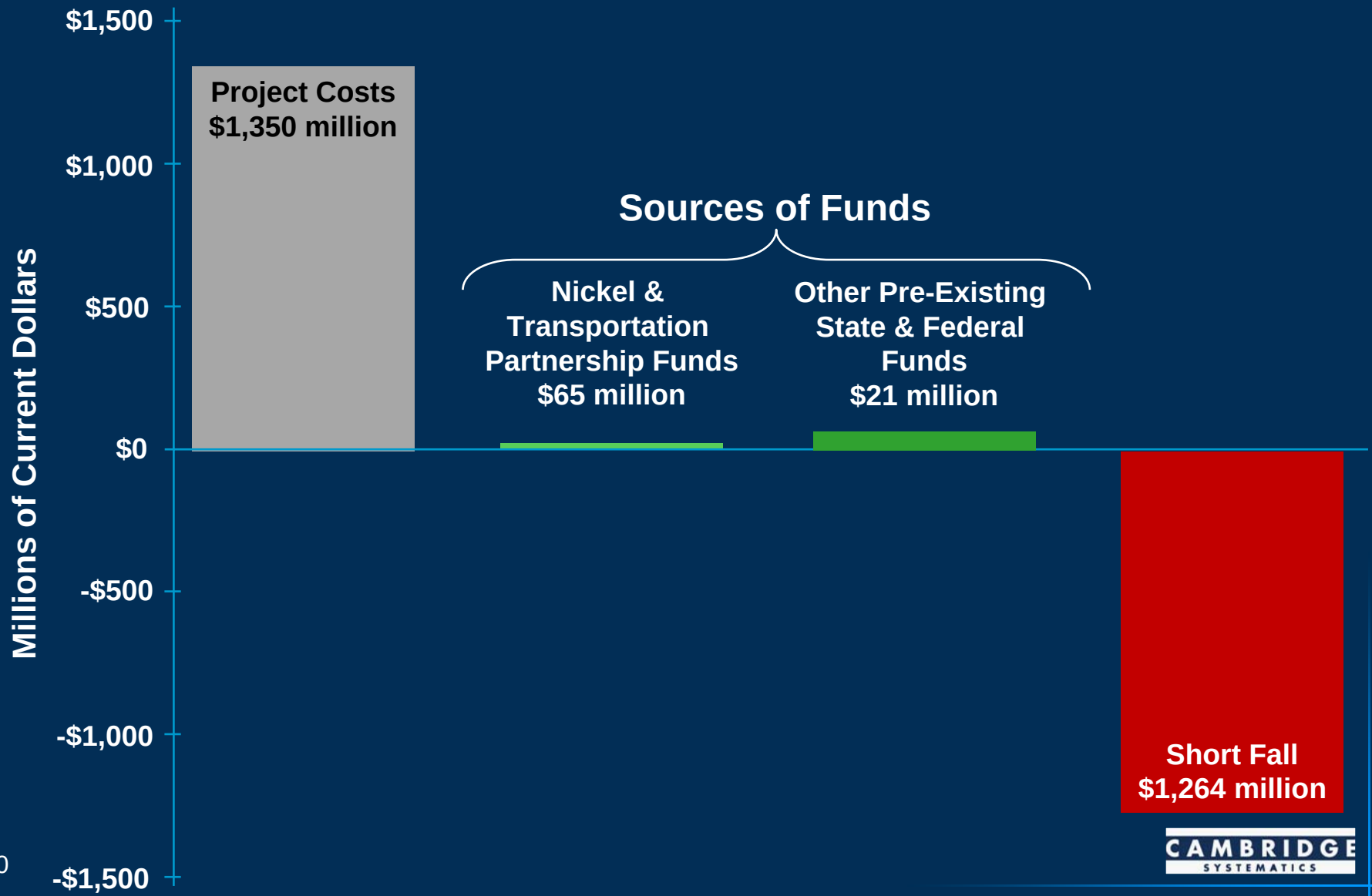
I-5/SR 509 Corridor Completion
Freight Benefits

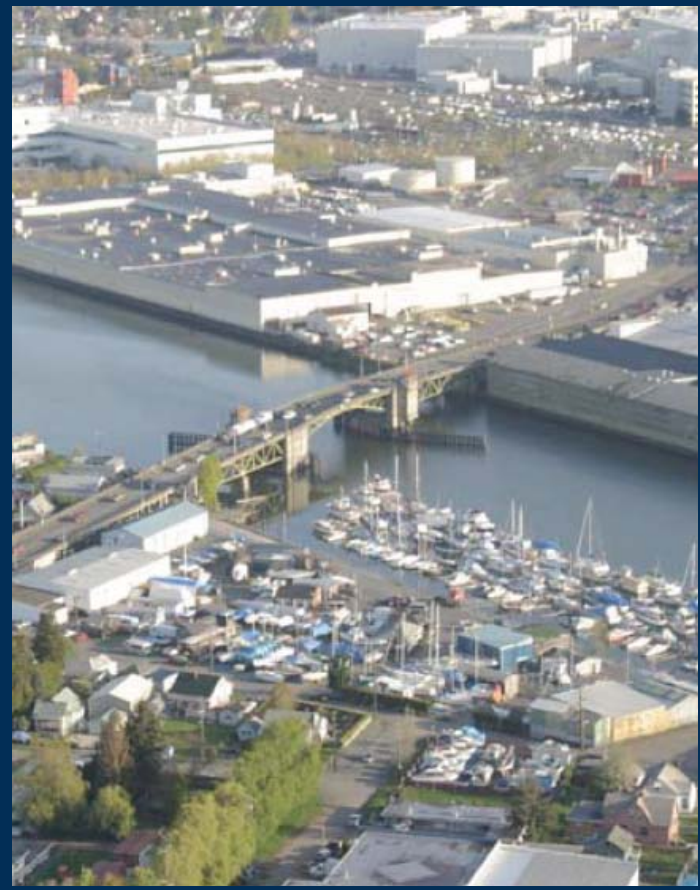
- Will provide direct route for freight and general traffic movements:
  - To Puget Sound Ports
  - To industrial areas of Seattle and South King County.
- Will allow up to 9,000 trucks per day to bypass I-5, SR 99 and local streets
- Will provide southern access to Sea-Tac International Airport
- Travel time between Seattle and Tacoma reduced by 12 minutes
  - Total public benefit of travel reduction: $100 million per year

I-5/SR 509 Corridor Completion
Project Financials (Millions of Current Dollars)



South Park Bridge Replacement
Moderate Nexus to Cargo User Fee

- Seismically vulnerable, in very poor condition
- Bridge is a critical link in the regional freight network
  - Connects two industrial centers
  - Carries 14,000 trucks/day
  - Carries over 10 million tons of freight each year
  - Classified as T-1 Freight Route
- Corridor used as bypass for other major routes in the region



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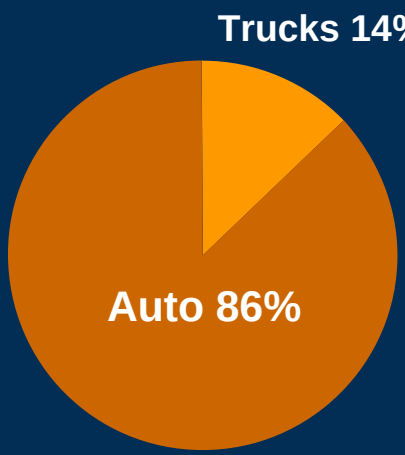
South Park Bridge Replacement
Freight Benefits

- Avoids significant detours and delay that will occur if bridge collapses
- Intersection delay
  - 1st Avenue S./East Marginal Way S.
  - East Marginal Way S./Boeing Access Road)
- Delay associated with re-rerouting of trips



Total Traffic Volume

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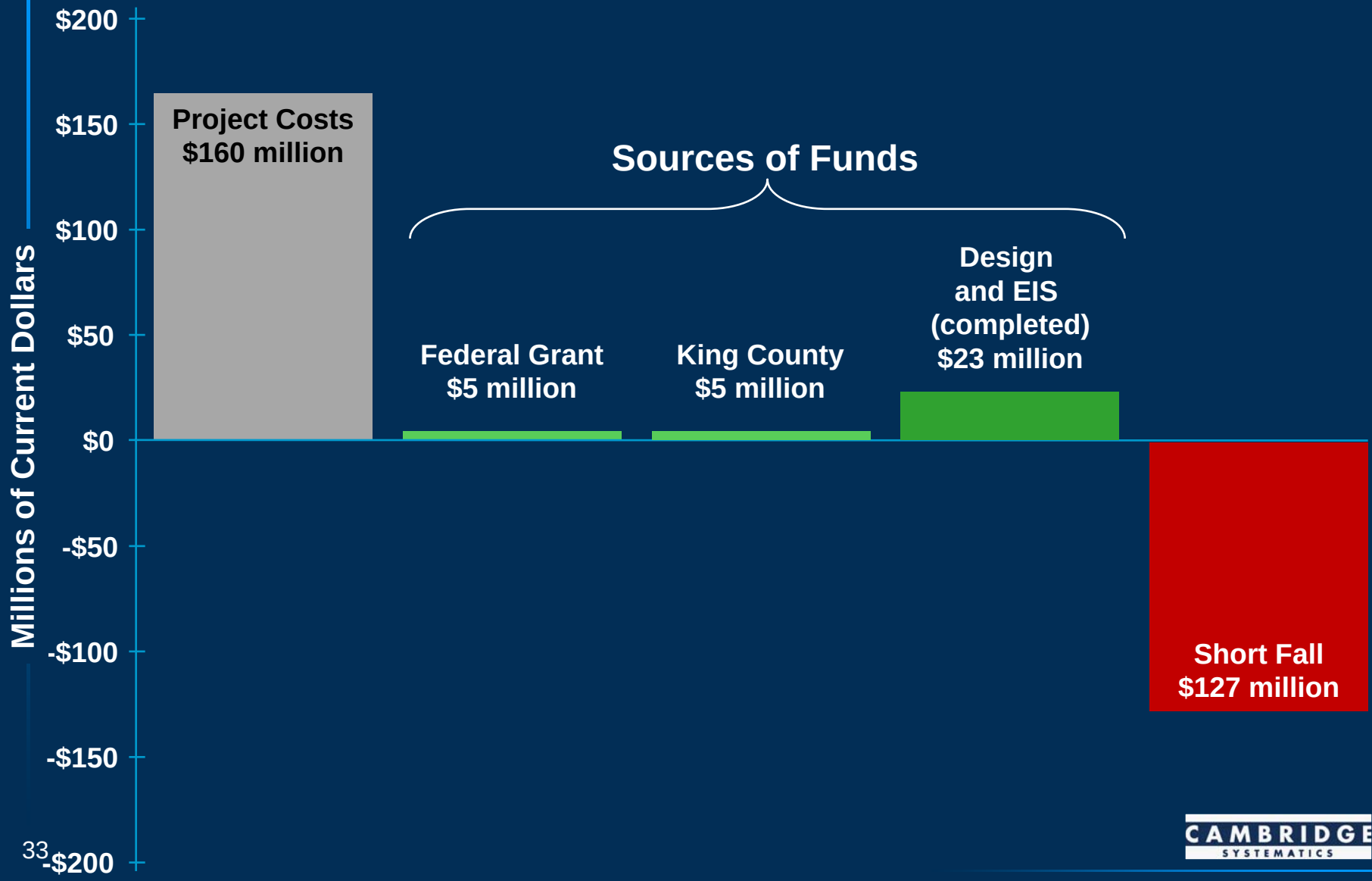
South Park Bridge Replacement
Financials (Millions of Current Dollars)



I-90 Snoqualmie Pass East project
Low Nexus to Cargo User Fee

- Key East-West Corridor
  - Frequent delays and collisions
  - Unsafe conditions for trucks
- Two phases:
  - Hyak-Keechlus dam: fully funded
  - Keechlus dam to Easton: unfunded ($800 million cost)
- Listed a priority freight project in
  - Legislative budget
  - WA Transportation Plan
- Eastern Washington agribusiness regard I-90 as their route to ports, thus a nexus with container fees

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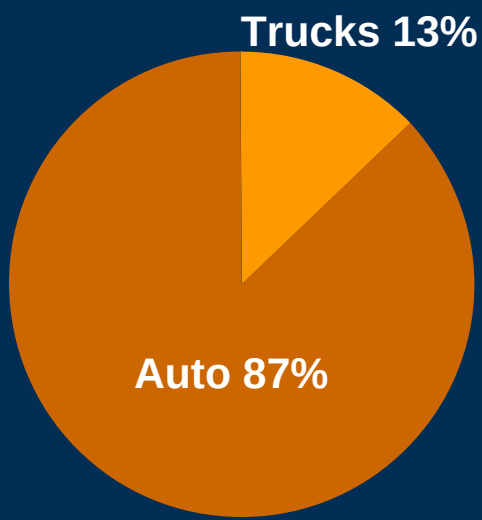
I-90 / Snoqualmie Pass Phase II Improvements

- Widen road from 4 to 6 lanes
  - Wide loads currently must detour
  - Trucks frequently stop on hills—no place to pull over.
- Add truck climbing lanes
- Straighten roadway / improve sight distance
- Add ITS solutions - detectors for ice & snow
- Remove bridges for improved vertical clearance
- Reduce collisions through wildlife connectivity improvements

I-90 Snoqualmie Pass East Project
Description of Benefits

- Travel time reliability
- Safety
- Future congestion



Total Traffic Volume

Truck Accident at Snoqualmie Pass

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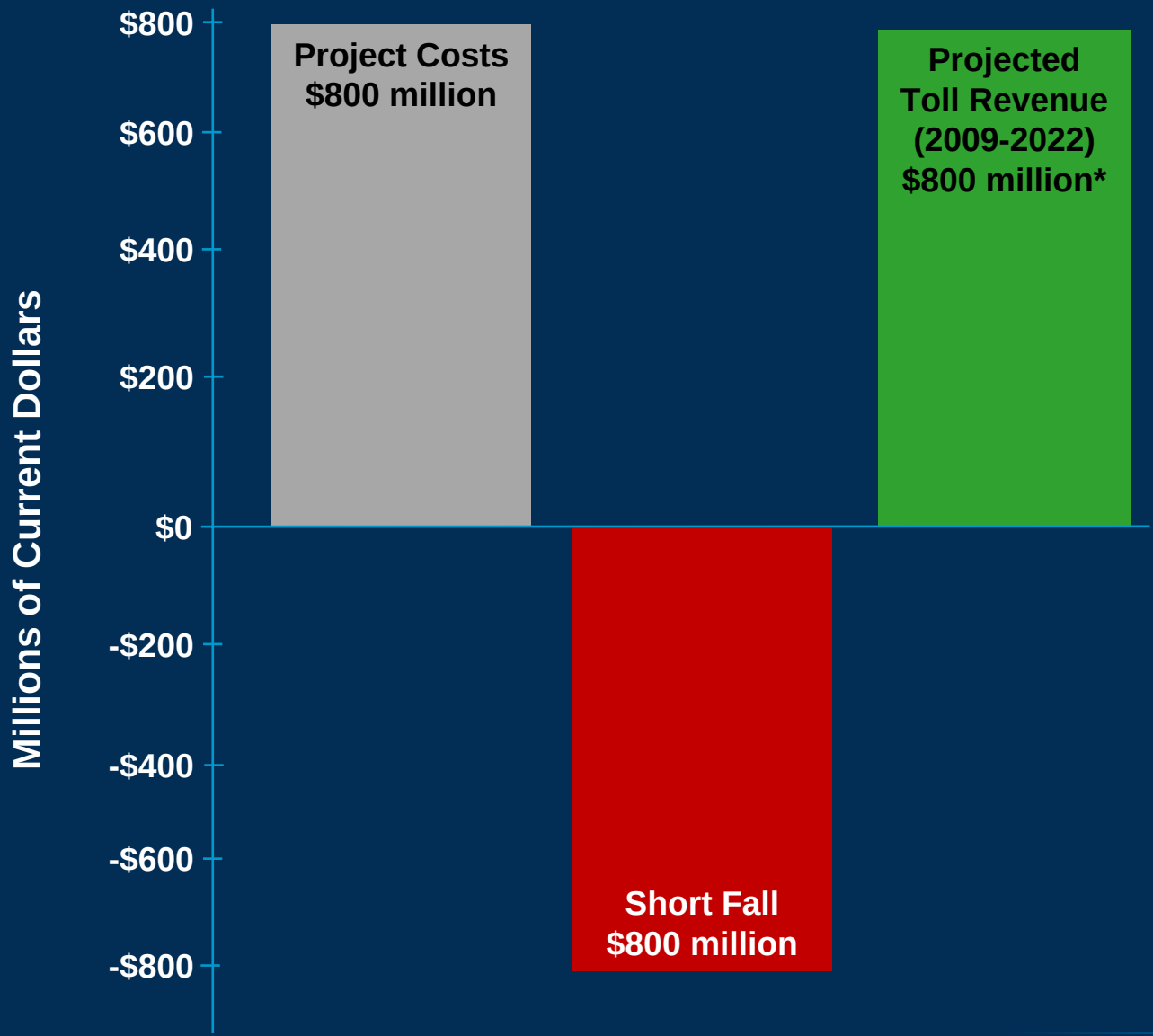
I-90 Snoqualmie Pass East Project
Financials (Millions of Current Dollars)



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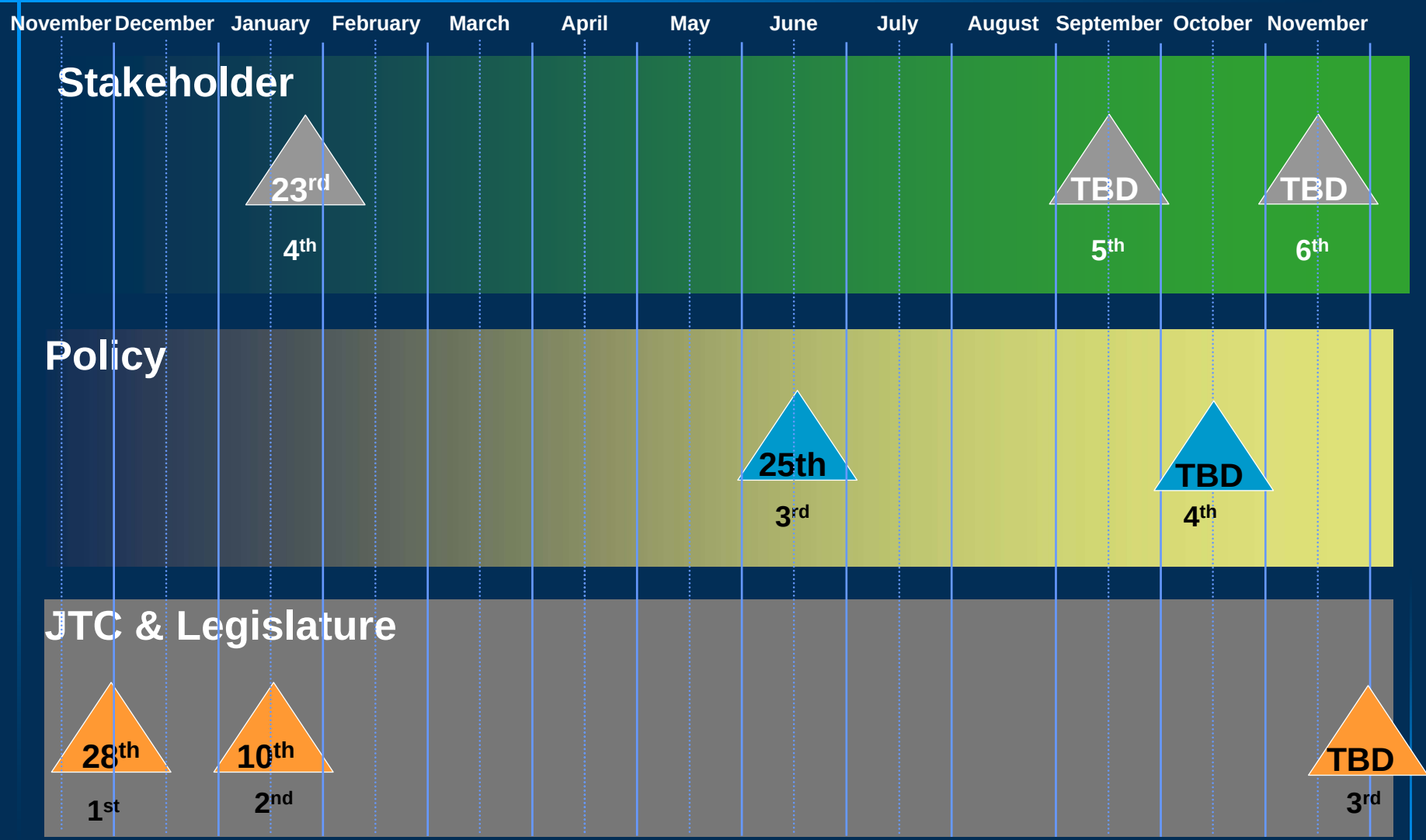
5. Schedule of Stakeholder & Policy Group Meetings



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Next Steps
Review of Study Tasks

- [x] 1. Evaluate Existing & Potential Funding Incentives
- [x] 2. Analyze Current Industry Taxes & Fees
- [x] 3. National & International Comparison of Freight Funding
- [x] 4. Assess Non-Freight Funding Sources
- [ ] 5. Measure Economic Impact of Funding
- [x] 6. Assess Diversion of Marine Cargo
- [x] 7. Measure ROI of Freight Infrastructure
- [x] 8. Examine Other Potential Project Specific Fees
- [x] 9. Recommend a Project Recommendation Body
- [x] 10. Supplemental Work Tasks
- [x] 11. Stakeholder/Legislator Groups

- [x] Completed
- [x] Underway

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Next Steps (Continued)
Proposed Worksteps

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Adjournment