



House and Senate Transportation Committees Briefing

Washington State Road Usage Charge Assessment

January 23, 2014



CAMBRIDGE
SYSTEMATICS

BERK



Washington State Transportation
Commission



Washington State
Department of Transportation

Overview

- **Legislative directives and outcomes, and process**
- **Key Findings**
- **Goals and guiding principles**
- **Operational concepts we evaluated**
- **Business case evaluation and comparison to gas tax increase**
- **Proposed work plan and budget**

Legislative Directives in 2012 and 2013

And their Outcomes

Spring 2012 – Legislature Directs:

- *Transportation Commission to “assess the feasibility of transitioning from the fuel tax to a road user assessment method.” directed by a Steering Committee.*
- *Department of Transportation to evaluate “operational feasibility.”*

Outcome:

- *Finding: road usage charging is feasible*
- *Commission recommends two-year work plan to get to “ready to implement.”*

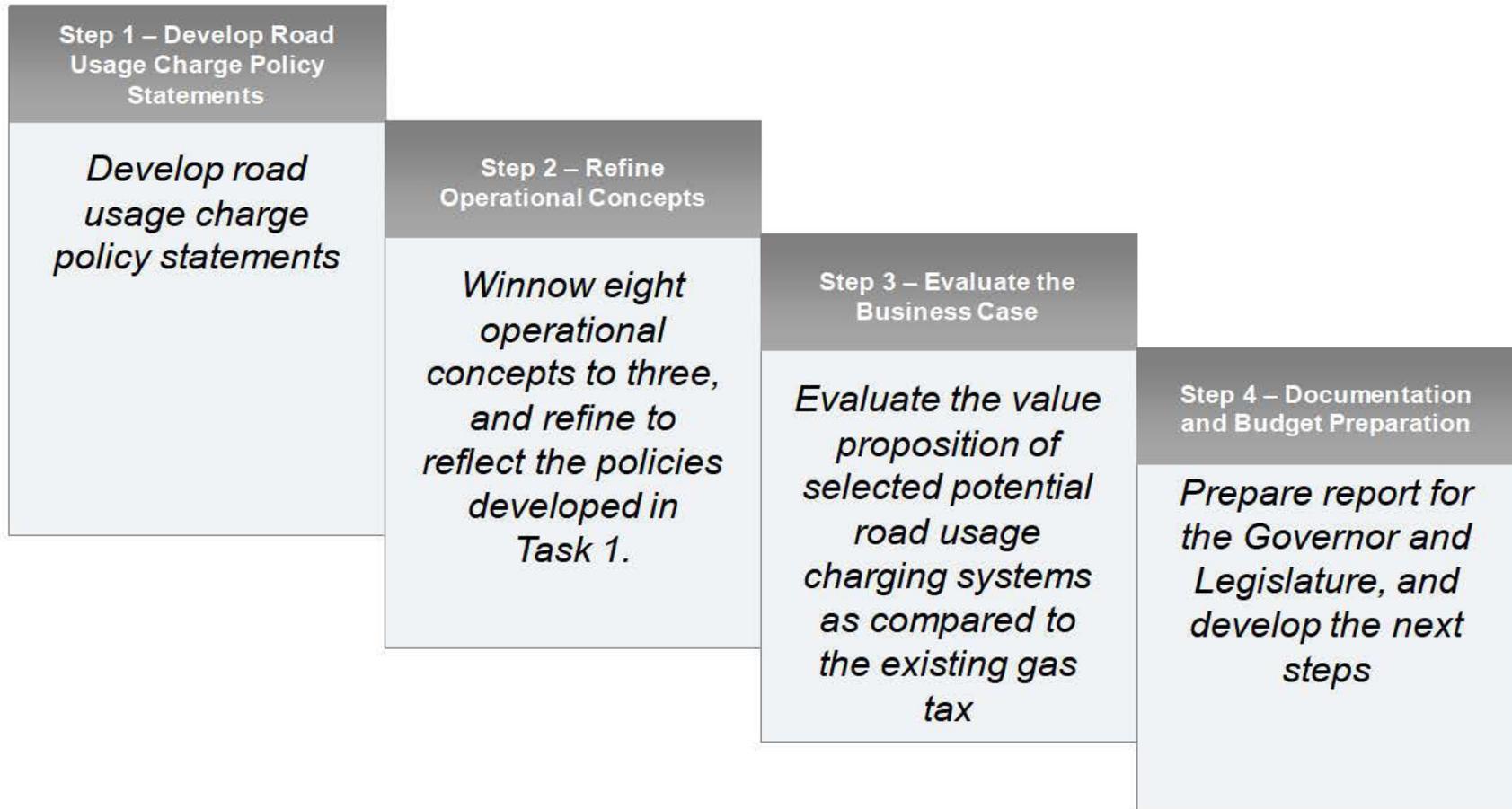
Spring 2013 – Legislature Directs:

- *Transportation Commission to evaluate the business case for road usage charging*
- *Department of Transportation to continue operational investigations.*
- *Steering Committee now includes legislative leaders*

Outcome:

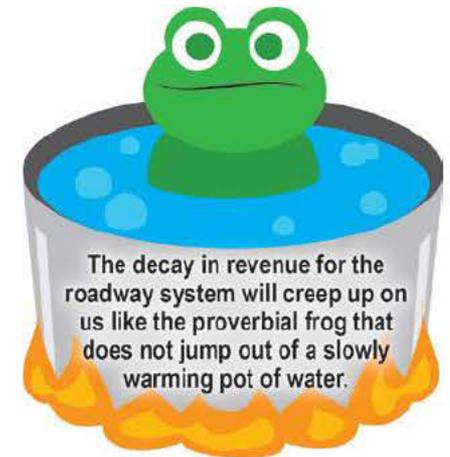
- *Developed policy framework*
- *Evaluated business case for a range of operational concepts*
- *Identified issues to be resolved*

2013 Policy Development and Business Case Evaluation Process

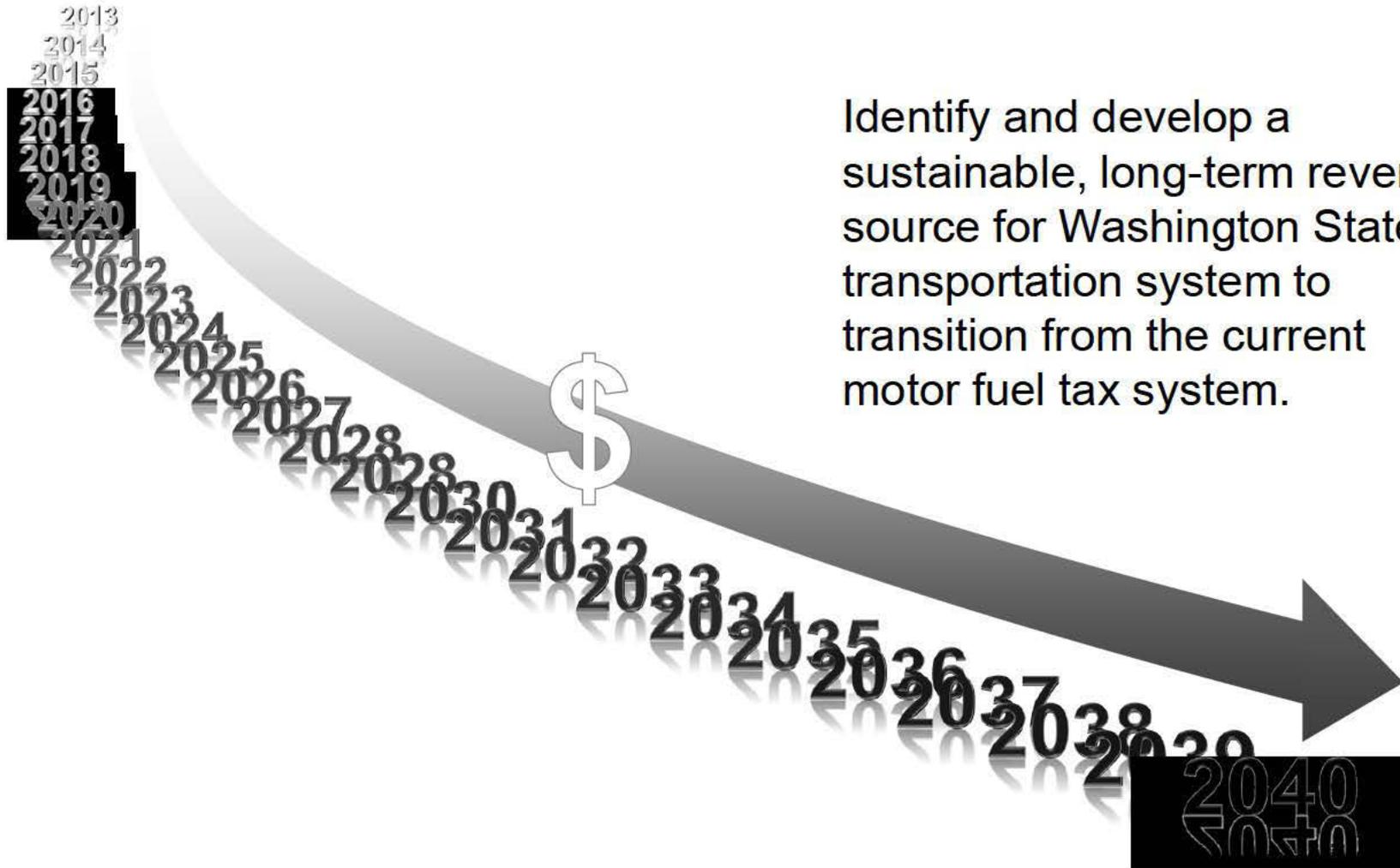


Key Findings

- **The road usage charge systems we evaluated will cost more to collect than the gas tax, but will have greater and more stable net revenue over 25 years**
- **Providing drivers choice as to how they pay a road usage charge will help improve public acceptance and mitigate privacy concerns**
- **Gas tax increases can raise more net revenue in the short term than the road usage charges we evaluated , but over the long term will continue to erode in value, thus requiring frequent increases**
- **A road usage charge system with choice ensures everyone pays their fair share for using the roads, regardless of fuel source or miles per gallon**



Recommended goal: Identify a *Sustainable Revenue Source*



Identify and develop a sustainable, long-term revenue source for Washington State's transportation system to transition from the current motor fuel tax system.

13 guiding principles (not in priority order) aimed at achieving the goal:

- The following guiding principles are aimed at achieving the goal:

<ul style="list-style-type: none">● Privacy● Transparency● Cost-effectiveness● Complementary policy objectives	<ul style="list-style-type: none">● Equity● Simplicity● Accountability● Enforcement● Data Security	<ul style="list-style-type: none">● User Options● System Flexibility● Interoperability and Cooperation● Phasing
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- Other important factors:

- » Whether it is important to distinguish between travel on Washington public roads and other roads (e.g., outside the State)
- » Whether people from outside Washington should pay

Proposed Operational Concepts Assessed in Business Case Evaluation

- **Winnowed 8 operational concepts from prior work down to three to determine a range of possibilities:**
 - » **A. Time Permit**
 - A flat fee to drive a vehicle an unlimited number of miles for a given period of time (e.g. a month or a year)
 - » **B: Odometer Charge**
 - A per-mile charge measured by odometer readings
 - » **C: Automated Distance Charge**
 - A per-mile charge measured by in-vehicle technology that can distinguish between in-state and out-of-state travel with periodic billing
 - » **Plus, combinations - A&B; A&C; B&C; A+B+C**



Business case evaluation

- **Financial and non-financial considerations**
 - » Policy makers can balance these
- **Performance criteria based on the goals and guiding principles**
- **Four key assumptions to keep the analysis simple:**
 - » Road usage charges would replace the gas tax in 2015, with no transition period
 - » Revenue neutral rate equal to expected gross gas tax revenue in 2015
 - » Road usage charges would apply to all vehicles that do not use diesel fuel
 - » Assumed government operation—private service providers have the potential to lower costs
- **Financial model of costs and revenues**
 - » A range of forecast scenarios for 2015-2040

In all cases evaluated, road usage charging yielded higher net revenues for the 2015-2040 period

- We estimate road usage charging to yield up to \$2.1 billion to \$3.1 billion more than the gas tax between 2015 and 2040
- Considerable differences in the estimated costs of government collection:

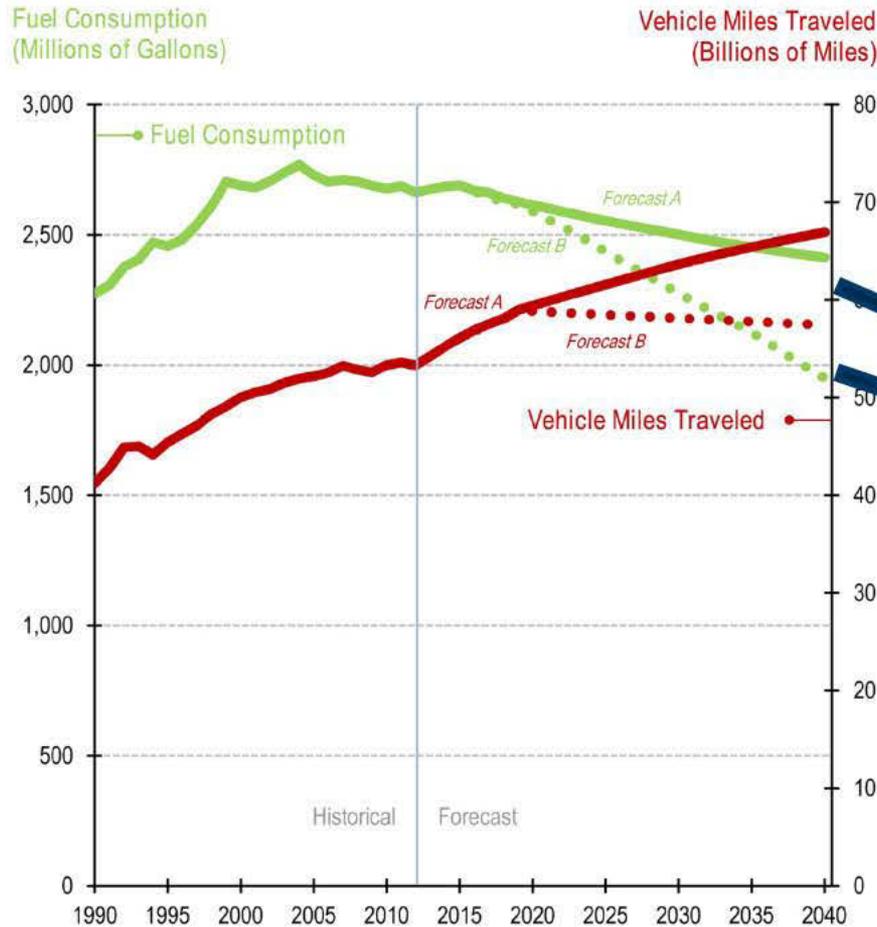
Concept	Cost/Revenue Ratio
A	7%
B	8%
C	12-13%
A+B+C	10%
Gas Tax	0.8% (excludes evasion)

- Different assumptions could yield different results, but:
 - » None of the sensitivity tests led to better financial performance for the gas tax

No single concept outperforms the others when considering the non-financial evaluation criteria

	Advantages	Disadvantages
Gas Tax	<ul style="list-style-type: none"> • Simple • Easy to enforce • No privacy issues 	<ul style="list-style-type: none"> • People are unaware of the tax and how much they pay (not transparent) • Imperfect proxy for road usage in that it varies greatly according to the fuel economy of individual vehicles
Concept A: Time Permit	<ul style="list-style-type: none"> • Transparent • Relatively simple • Easy to enforce • No privacy issues 	<ul style="list-style-type: none"> • No relationship to road usage
Concept B: Odometer Charge	<ul style="list-style-type: none"> • Transparent • Relatively simple • Easy to enforce • Privacy not a significant issue (but some might object to mileage reporting) • Strong relationship to use 	<ul style="list-style-type: none"> • Border residents that travel out of state or drive on private land may pay for many miles driven out of state or off public roads
Concept C: Differentiated Distance Charge	<ul style="list-style-type: none"> • Transparent • Strongest relationship to use, capturing in-state versus out-of-state travel 	<ul style="list-style-type: none"> • Less simple than others • Perception of privacy infringement • Less easy to enforce

The business case rests on the pace of fuel economy improvements



Fuel Economy Assumptions

Scenario	2040 Average mpg
2013	19.5
2040 Implied state forecast	27.7
2040 Alternative forecast	34.3

Notes:

Implied state forecast = the state forecast of VMT/state forecast of fuel consumption.

The state did not independently forecast mpg.

Alternate forecast based on the US Energy Information Agency and Global Insight forecasts.

“How much gas tax increase achieves the same financial result as a road usage charge?”

- Compared to combination of concepts A+B+C
- Two views of “same financial result”:
 - » Incremental gas tax increases every five years
 - » A one-time increase in 2015 to achieve the same net present value by 2040
- The answer varies from 2.2 cents to 20.2 cents, depending on how you look at it:

Gas Tax Needed by 2040 to Equal Net Road Usage Charge Revenue for Concept A+B+C at 2015 Revenue Neutral Rate.

Fleet Fuel Economy Forecast by 2040	Gas tax increase (cents)	Gas tax amount (cents)
Incremental increases every 5 years, starting in 2022 – final amount of increase by 2040		
Global Insight Forecast (34.3 mpg)	20.2	57.7
Implied State Forecast (27.7 mpg)	9.1	46.6
One time increase in 2015		
Global Insight Forecast (34.3 mpg)	5.0	42.5
Implied State Forecast (27.7 mpg)	2.2	39.7

Implications of this comparison to a gas tax increase

- **Important to remember:**

- » Analysis based on matching expected gas tax revenue in 2015
- » We do not imply that this is the “right amount” of money

- **Key takeaways:**

- » Emphasizes the declining ability of the gas tax to generate a sustainable revenue stream without periodic increases
- » Emphasizes the up-front investment cost of the road usage charge approach
- » Encourages an examination of the non-financial performance criteria

- **Steering Committee’s reaction:**

- » Increases in the gas tax will provide short term solutions, but meeting long-term needs will be challenging
- » A road usage charge is a more sustainable, and reliable revenue source that ensures everyone pays their fair share

Next Steps

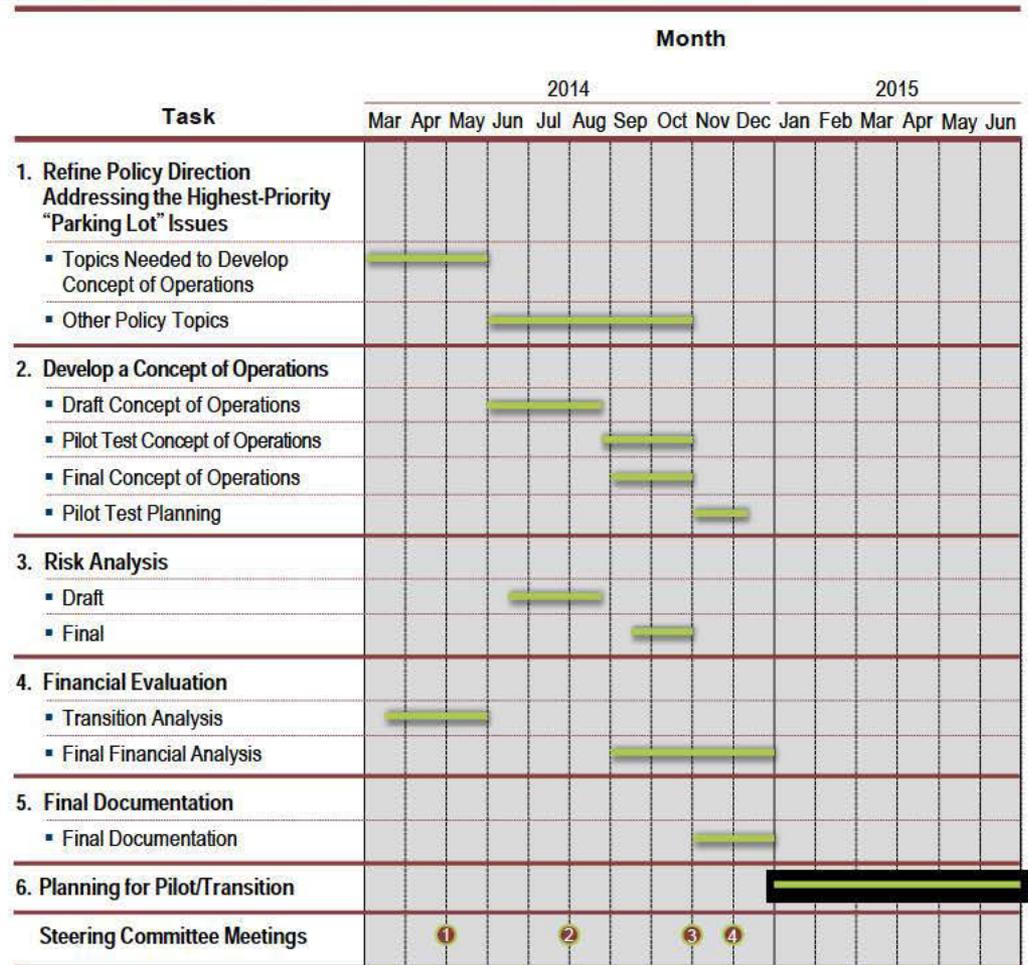
- Continue these investigations so that Washington has options developed when action may be needed in the future
- Refine road usage charge concepts to address policy, technical, and public acceptance issues that have been identified
- The Transportation Commission is requesting funding to the State Legislature to allow this work to continue in 2014 & 2015
- Should the work continue as proposed, Washington State will be on track to move into implementation/ pilot phases by late 2015.

Work Plan Objectives

- **Answer some of the “parking lot” issues that guide a specific concept of operations and to inform potential legislation**
- **Create a detailed, refined concept of operations for a potential road usage charge system, and for a potential pilot or phased implementation plan**
- **Defer (until after 2015 Legislative session) work on:**
 - » **Public education and outreach**
 - » **Rate setting decisions**
 - » **Allocation of implementation responsibility among agencies**
 - » **Detailed technical requirements/standards**
 - » **Detailed transition strategy**
 - » **Pilot or market testing of implementation options**

Schedule

- First three months: policy topics needed to develop the concept of operations and initial evaluation of transition approaches
- Concept of operations, risk analysis and further policy analysis in parallel
- Financial analysis at end
- Final documentation by late Fall 2014.
- Potential pilot test/transition planning in early-mid 2015.



Estimated Budget

Task	March 2014- June 2014	July 2014- June 2015	Total
1. Refine Policy	\$114,500	\$ 69,400	\$183,900
2. Concept of Operations	81,600	81,600	163,200
3. Risk Analysis	-	105,600	105,600
4. Financial Evaluation	85,100	120,100	205,200
5. Final Documentation	39,800	60,700	100,500
6. Planning for Pilot /Transition	-	105,600	110,600
Total	\$321,000	\$548,000	\$869,000

THANK YOU

CONTACT INFORMATION

Reema Griffith, Executive Director
Washington State Transportation Commission
griffir@wstc.wa.gov
360-705-7070