



# Washington State Road Usage Charge Assessment

February 2013

Transportation Committees of  
*Washington State Senate and  
House of Representatives*



**CAMBRIDGE**  
SYSTEMATICS

**BERK**

NATALIE  
**QUICK**  
CONSULTING

**ARTAGNAN**  
CONSULTING



Washington State Transportation  
Commission



Washington State  
Department of Transportation

# Overview

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- **Background:**
  - » Legislative budget proviso in ESHB 2190 (2012 Supplemental Transportation Budget)
  - » Reasons to consider gas tax alternatives and prior efforts
- **Road usage charging defined – there are many ways to do it**
  - » Some international experience
  - » Some US evaluations and trials
- **Evaluated 8 potential road usage charge concepts for feasibility**
- **Recommendation:**
  - » Feasible, but requires further development
  - » Work plan to narrow policy objectives and potential operational concepts

# Legislative Budget Proviso

## ESHB 2190

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- Two components, combined into one study:
  - » Transportation Commission: *“Solely to determine the feasibility of transitioning from the gas tax to a road user assessment system of paying for transportation”*
  - » WSDOT: *“Solely to carry out work related to assessing the operational feasibility of a road user assessment”*
- Steering committee to provide direction to and guide the Transportation Commission's work
  - » Update the Governor and the Legislature on this work by January 1, 2013.
  - » This update must include a plan and budget request for work to be completed during the 2013-2015 fiscal biennium.



# ESHB 2190

## Required Activities

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- Review relevant reports and data related to models of road usage assessments and methods of transitioning to a road usage assessment system, and analyze the research to identify issues for policy decisions in Washington;
- Make recommendations for the design of systemwide trials;
- Develop a plan to assess public perspectives and educate the public on the current transportation funding system and options for a new system; and
- Assess technology, agency administration, multistate and Federal standards, and other necessary elements.

# Steering Committee Members and Affiliations

Name and Affiliation	Representing	Name and Affiliation	Representing
Steering Committee Chair, Commissioner Tom Cowan (WSTC Commissioner)	WSTC	Pete Capell (Clark County Public Works)	Cities and Counties
Commissioner Anne Haley (WSTC Commissioner)	WSTC	Cynthia Chen (University of Washington)	Appointed by WSTC
Commissioner Charles Royer (WSTC Commissioner)	WSTC	Scott Creek (Crown Moving Company, Inc.)	Trucking industry
Sen. Tracey Eide (Federal Way (D) 30 <sup>th</sup> District)	Washington Senate	Don Gerend (City of Sammamish Councilmember)	Cities and counties
Sen. Ann Rivers (La Center (R) 18 <sup>th</sup> District)	Washington Senate	Paula Hammond (WSDOT Secretary)	Appointed by WSTC
Rep. Andy Billig (Spokane (D) 3 <sup>rd</sup> District)	Washington House of Representatives	Tom Hingson (Everett Transit)	Public transportation
Rep. Mark Hargrove (Covington (R) 47 <sup>th</sup> District)	Washington House of Representatives	Sharon Nelson	Appointed by WSTC
Curt Augustine (Alliance of Automobile Manufacturers)	Auto and light truck manufacturers	Kush Parikh (INRIX)	User fee technology
Kurt Beckett (Port of Seattle)	Appointed by WSTC	Janet Ray (AAA Washington)	Motoring public
Rod Brown Jr. (Cascadia Law Group PLLC)	Environmental	Neil Strege (Washington Roundtable)	Business

# Why the Motor Fuel Tax is Not Sustainable

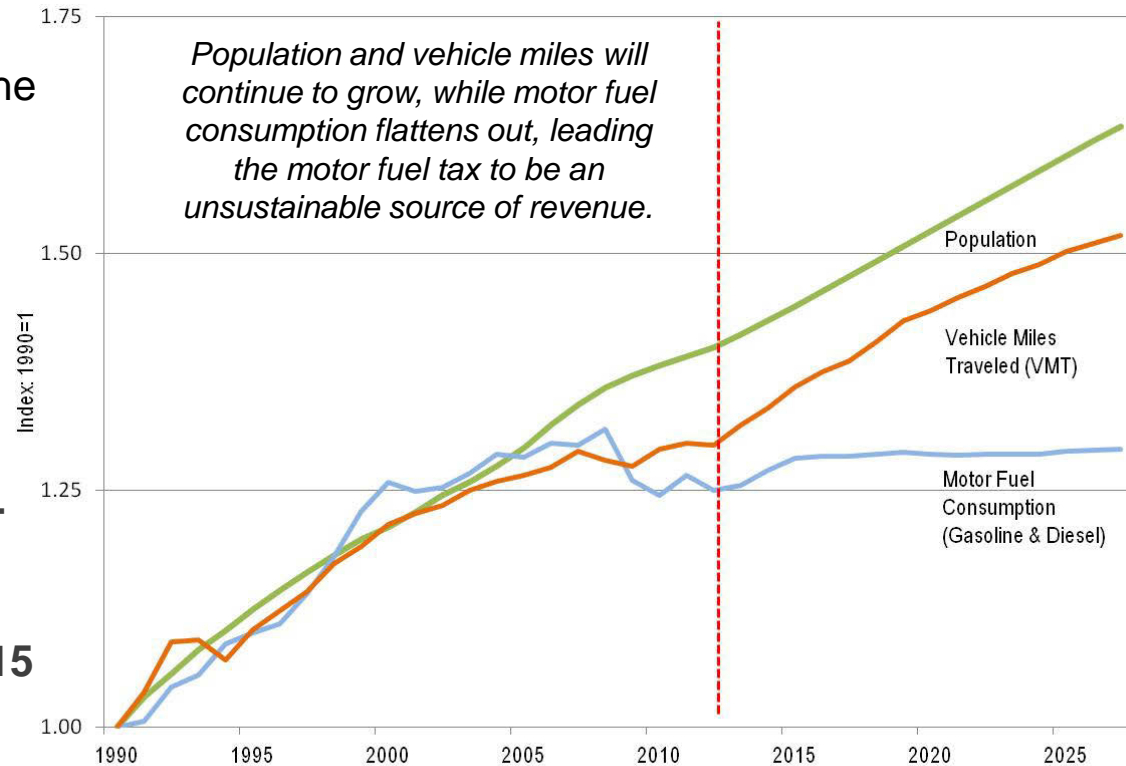
- The motor fuel tax is levied as a fixed amount per gallon, so it:

- » Does not rise and fall with the price of fuel;
- » Does not keep pace with inflation; and
- » Declines on a per-mile basis as vehicles become more fuel-efficient.

- Better fuel economy in light-duty vehicles will be the primary cause of lower fuel consumption over the next 15 years.

- Population and vehicle miles will continue to increase but will consume less fuel – this translates into less revenue to fund transportation.

Population, Vehicle Miles, and Motor Fuel Consumption Trends and Forecast (1990-2027)





# Road Usage Charging Recommended in Several Washington Studies

2007 – Long-Term  
Transportation Financing  
Study

- Vehicle-miles traveled fees among the long-term recommendations.

2009 – Implementing  
Alternative Transportation  
Funding Methods

- Analyzed different mid- and long-term funding methods, including vehicle-miles traveled fees.

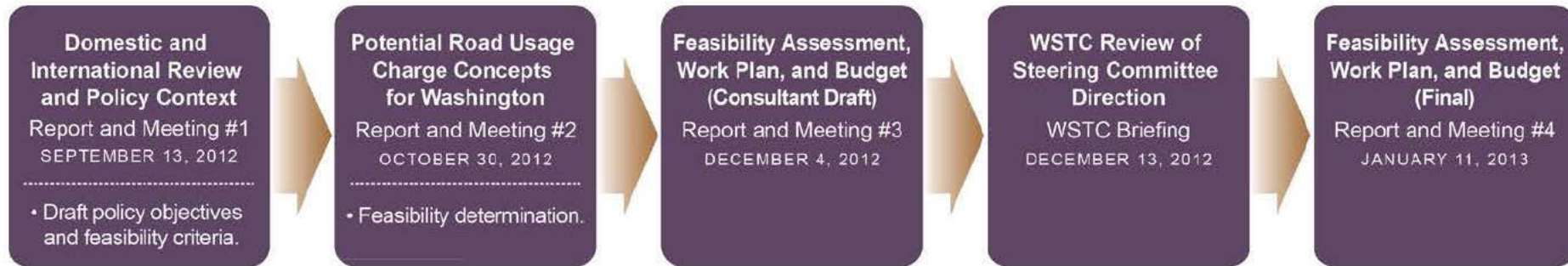
2010 – Washington  
Transportation Plan;  
2012 – Connecting  
Washington

- Recommended further exploration of vehicle-miles traveled fee.

**...in addition to several national studies**

# Feasibility Assessment Process

- Steering Committee conducted its feasibility assessment in steps, establishing a common understanding of road usage charge policy and technical considerations.



- **Agenda for this coming Spring:**
  - » Initial public assessment using Voice of Washington survey panel.
  - » Begin to address the difficult policy issues, including research.

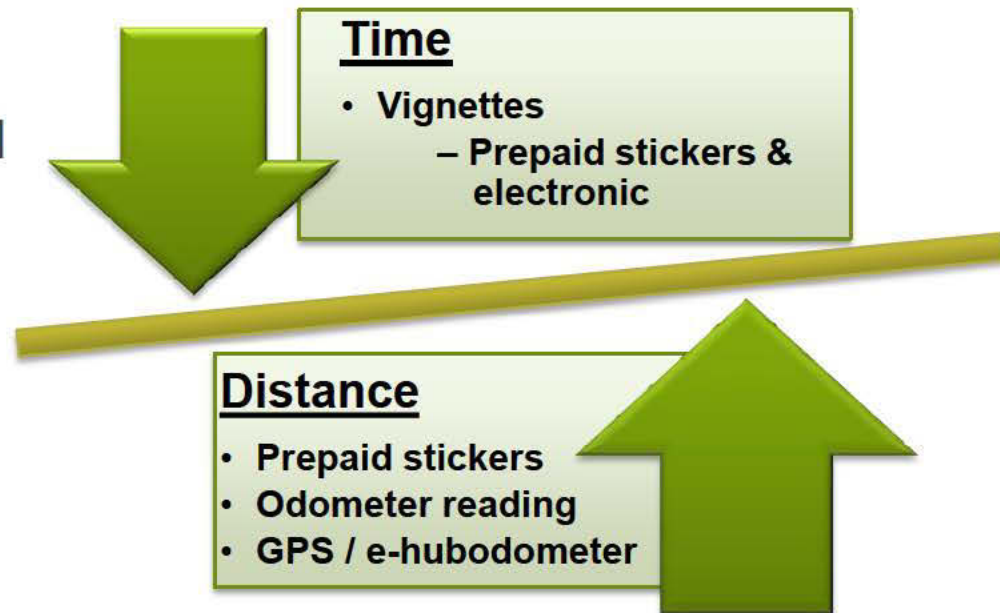


# What is a Road Usage Charge?

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- With road usage charging, drivers would pay for roads as they do for other utilities—based on how much they use.
- This study focused on general road usage charging, NOT:
  - » Tolls
  - » HOT or Express Toll Lanes
  - » Cordon or area charges

## Two Basic Forms of Road Usage Charging



# Road Usage Charge Experience

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## ● Operational

### » New Zealand

- Non-gasoline vehicles purchase blocks of kilometers
- Paper system since 1975 ; advanced systems being phased in

### » Europe – Vignette Systems

- Time-based sticker systems, with electronic being phased in

### » USA – Weight-distance taxes

## ● Studies in four countries

### » UK, Singapore, Netherlands, Hong Kong

### » Common characteristics:

- Studies underway for several decades or more, several rounds
- Rarely led to implementation
- Coupled with congestion charging, tolling, environmental impact charging

# U.S. Studies and Proposals

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## ● Examples:

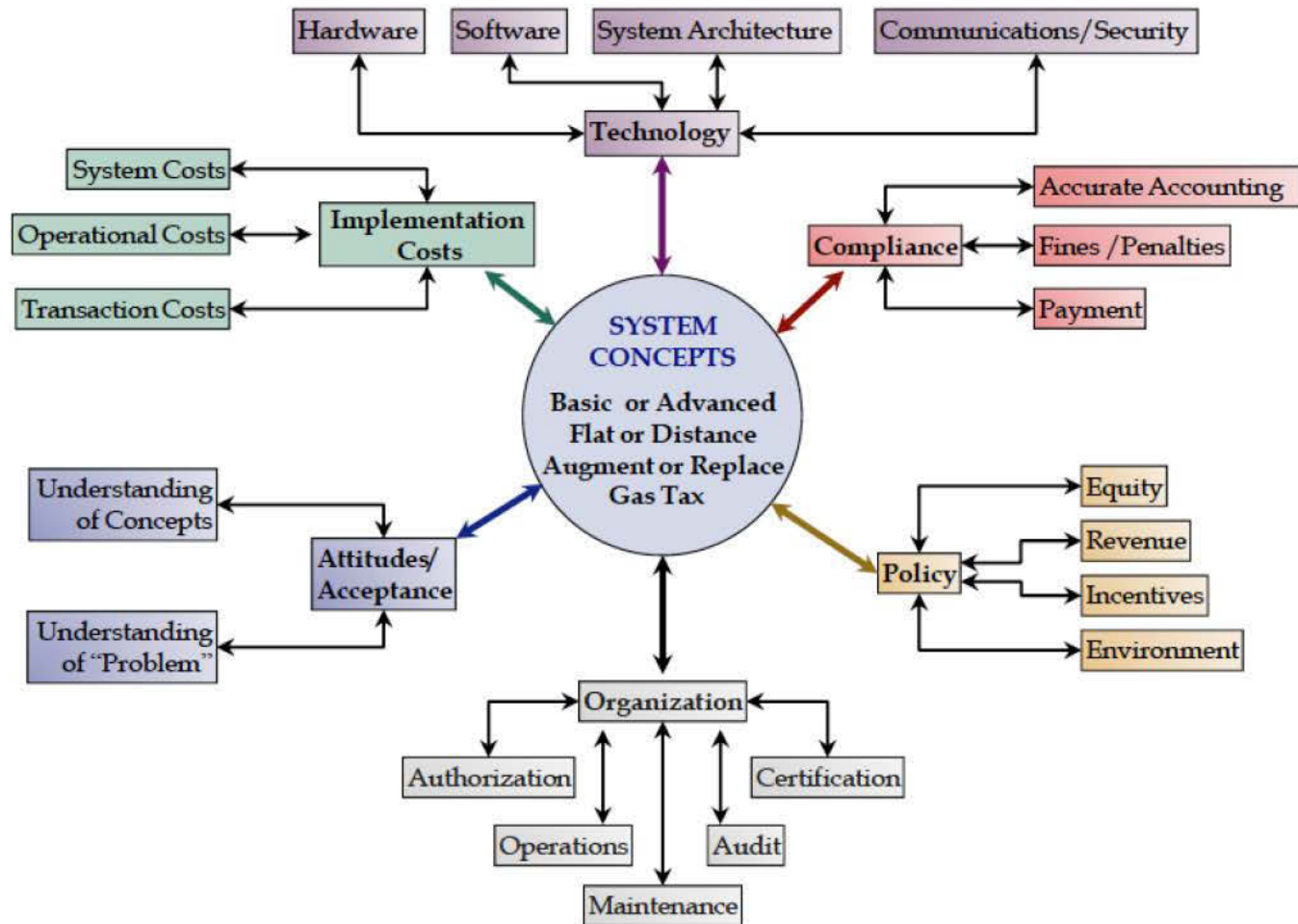
- » 20 states: Discussed, proposed, studied and pilot tested
- » Studies with completed trials:
  - University of Iowa, Oregon DOT, PSRC, Minnesota
- » Studies with trials in progress:
  - Minnesota, Oregon DOT
- » Studies without trial (so far):
  - I-95 Corridor Coalition, Nevada, Colorado, California

## ● Common characteristics

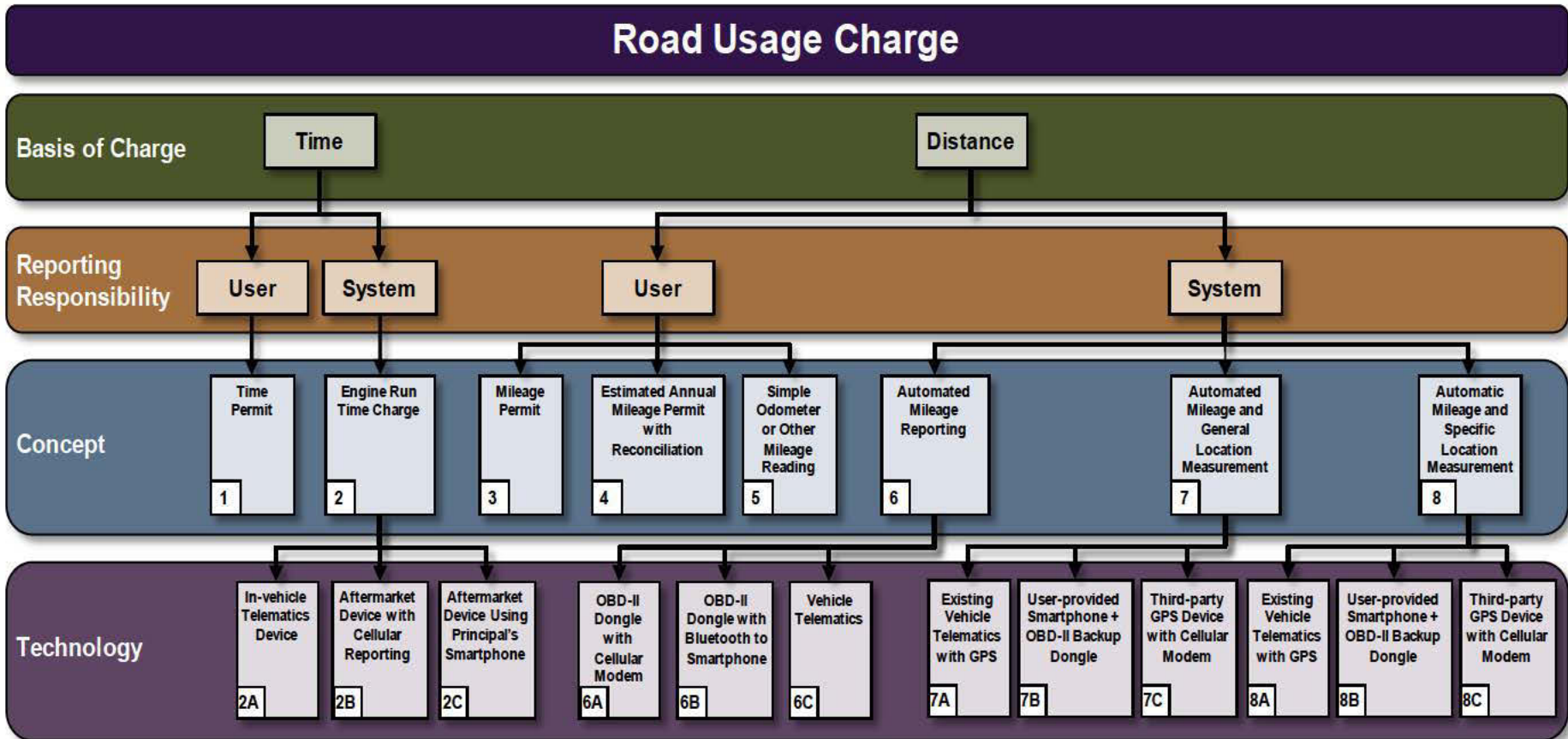
- » Similar motivations to Washington
- » Mostly about revenue generation, but some about congestion and emission reduction



# Transitioning from Gas Tax to Road Usage Charging: A “Wicked Problem”



# Potential Road Usage Charge Technologies



# Steering Committee Findings

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- **Successful international examples show that there are numerous viable operational concepts and technologies.**
- **There are many ways road usage charging could work.**
  - » **Some as simple as buying one-year permit or annual odometer readings.**
  - » **Others more technologically involved.**
- **However implemented, road usage charging will not be perfect.**
  - » **All taxing policies involve tradeoffs between ideal policy objectives and how these objectives can be implemented in the real world.**
  - » **Offering choices to users may solve many of the issues such as privacy and acceptance.**

**Steering Committee members unanimously agreed that road usage charging is feasible in Washington and recommended further assessment and advancement.**



# Difficult Policy Issues and Tradeoffs Remain

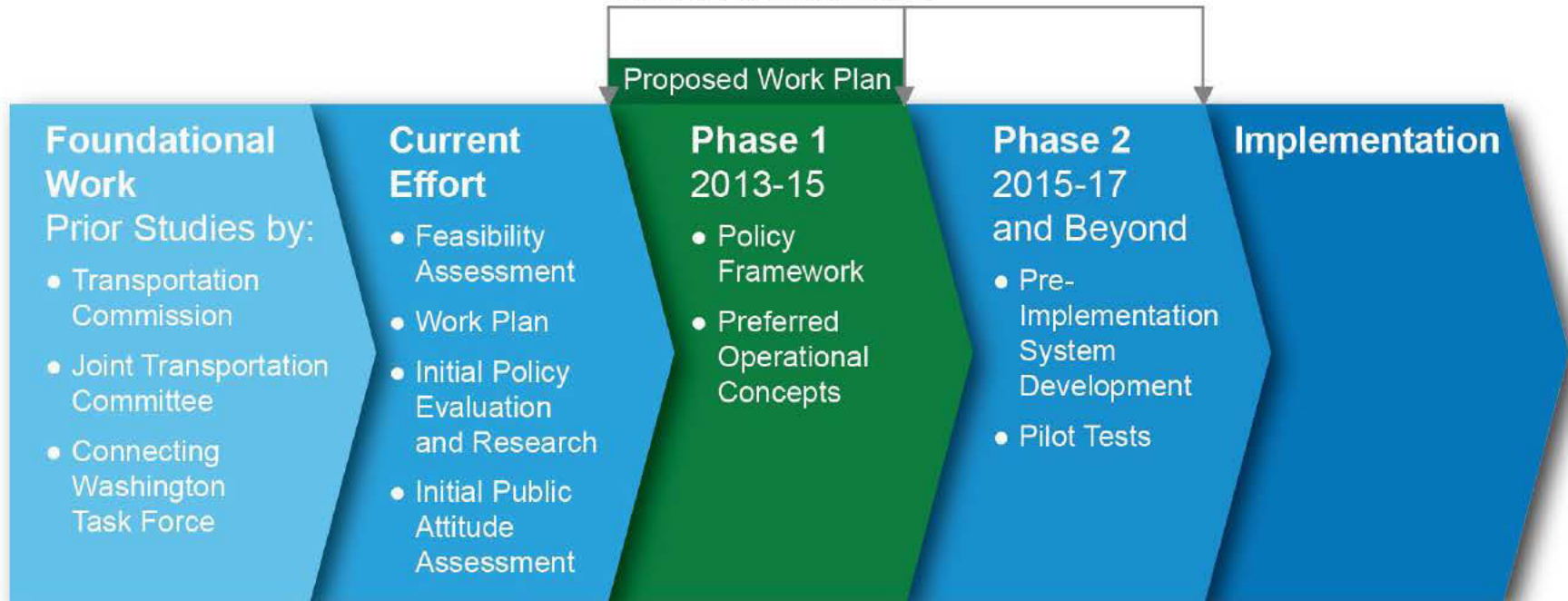
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- Relationship to the gas tax
- Social objectives
  - » Reduce energy use, greenhouse gas emissions and congestion; or encourage transit use?
- Use of revenues
  - » Just roads, or broader? Interpretation of 18<sup>th</sup> Amendment
- Equity among user groups
  - » Urban/rural; income.
- Privacy
- Rate-setting
  - » How important is it for a road usage charge to reflect actual miles traveled? Tradeoffs?
- Out-of-state issues
  - » Capture revenue from all out-of-state motorists? Out of state travel.

# Proposed Phased Work Plan

*Phasing allows Governor and Legislature to decide whether to continue research and development at several milestones.*

Check Points:  
Legislative Approvals Required to Proceed to Next Phases



# Potential Role of Pilot Tests

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- **Can assess technology, administrative systems, or public acceptance before committing extensive resources:**
  - » Evaluate technology;
  - » Evaluate systems from the users' perspective; and
  - » Build confidence with the public and decision-makers.
- **Can test individual components or an entire system.**
- **Best carried out in Phase 2 once policy direction is established and a preferred operational concept is chosen.**



# Proposed Budget: 2013-2015 Biennium

Task	Purpose	Cost
<b>Engaging the Public</b>		<b>\$390,000</b>
Task 1	<b>Measure Public Attitudes and Acceptance.</b> Understand public perceptions of road usage charging and transportation funding issues.	\$160,000
Task 2	<b>Communications and Public Engagement.</b> Provide information to the public and engage them in discussions about policy and operational issues.	\$230,000
<b>Policy Framework</b>		<b>\$430,000</b>
Task 3	<b>Define Policy Objectives.</b> Support the Legislature, Commission, and Steering Committee in establishing a road usage charge policy for Washington State.	\$170,000
Task 4	<b>Policy Research.</b> Provide the analysis and information to support informed policy decisions.	\$260,000
<b>Operational Concepts</b>		<b>\$130,000</b>
Task 5	<b>Define Operational Concepts.</b> Define how system users will experience the system when driving and paying charges.	\$130,000
<b>System Design</b>		<b>\$320,000</b>
Task 6	<b>Administrative Design.</b> Provide recommendations relating to the administrative functions of a road usage charge system.	\$120,000
Task 7	<b>System Architecture and Technical Requirements.</b> Begin to develop the system architecture and detailed technical requirements of the technology so that the technology can be tested and procured.	\$200,000
<b>Business Analysis</b>		<b>\$370,000</b>
Task 8	<b>Business Case.</b> Develop a business case based on the preliminary operational concepts developed in Tasks 5 - 7.	\$240,000
Task 9	<b>Evaluation Framework.</b> Provide objective criteria and an approach to evaluate whether the road usage charge achieves its desired results and policy objectives from Task 3.	\$30,000
Task 10	<b>Interoperability with Other Systems.</b> Provide guidelines for road usage charging interoperability with other similar systems such as tolling, fuel taxes, and road usage charges in other jurisdictions.	\$30,000
Task 11	<b>Transition Strategy.</b> Develop a manageable strategy to transition from the gas tax to a road usage charge, potentially in phases.	\$20,000
Task 12	<b>Risk Analysis.</b> Identify risks and potential mitigation measures to minimize adverse impacts and the cost of such impacts.	\$50,000
<b>Total</b>		<b>\$1,640,000</b>

# QUESTIONS?

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