

Road Usage Charge Guide

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January 20, 2026

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ACADEMIES *Sciences
Engineering
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TRB TRANSPORTATION RESEARCH BOARD

**CDM
Smith**



With You Today:



Jenny Roberts, PE

*National Road Usage
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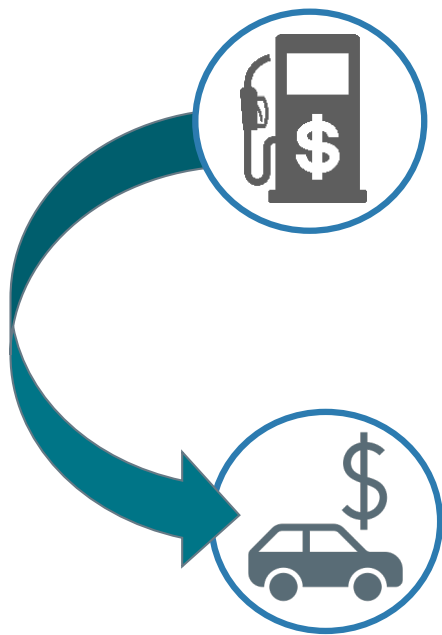


Roshini Durand

*Transportation Policy
and Service Design*



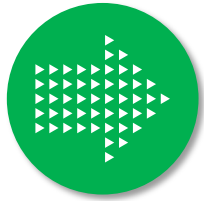
NCHRP RUC Guide Project Purpose



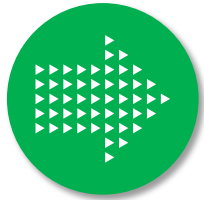
To evaluate and present viable paths and **strategies for implementing RUC** at the state, multi-state, and regional levels that generate revenues that could supplement and/or replace motor fuel taxes as the primary funding source for surface transportation.



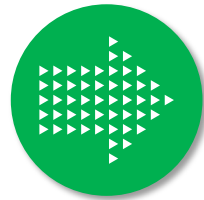
How It All Came Together



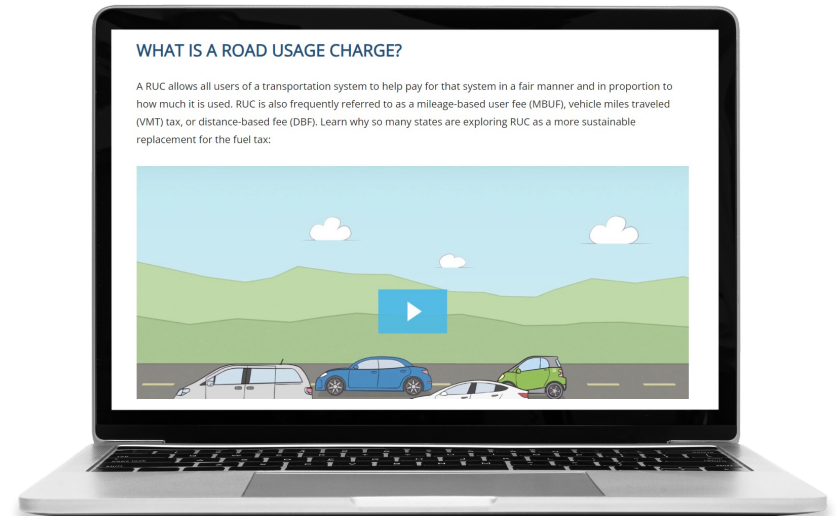
NCHRP was the convener/administrator



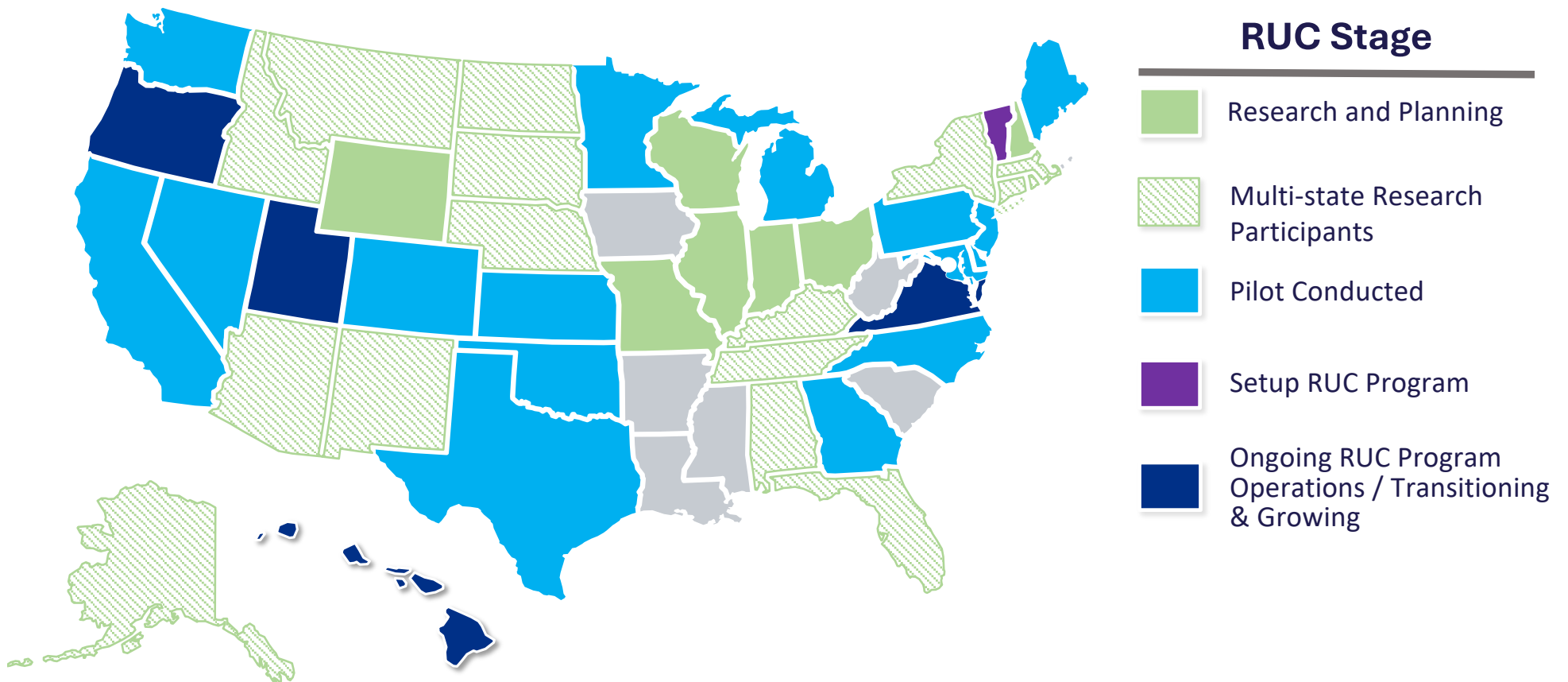
Panel of public/private sector RUC practitioners



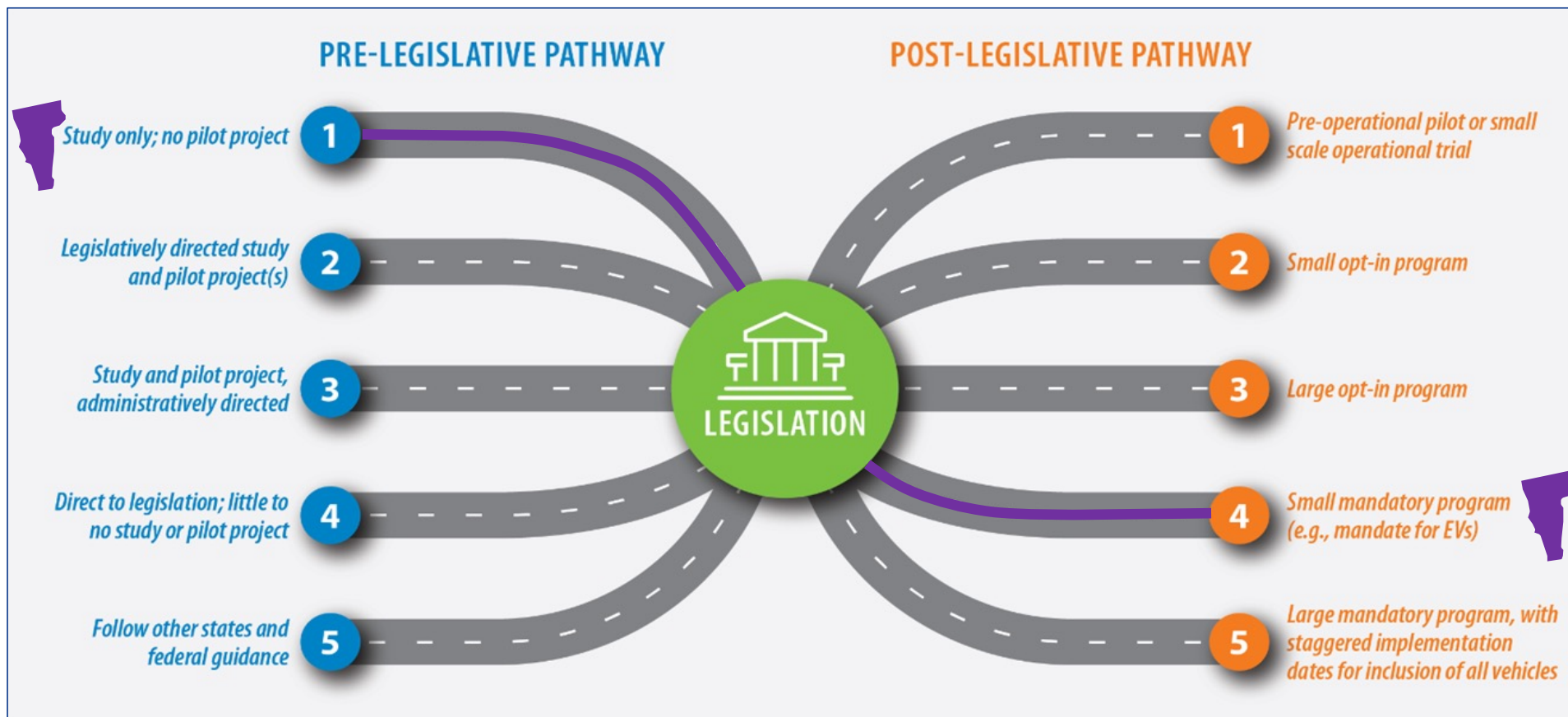
CDM Smith conducted the research and developed the WebResource



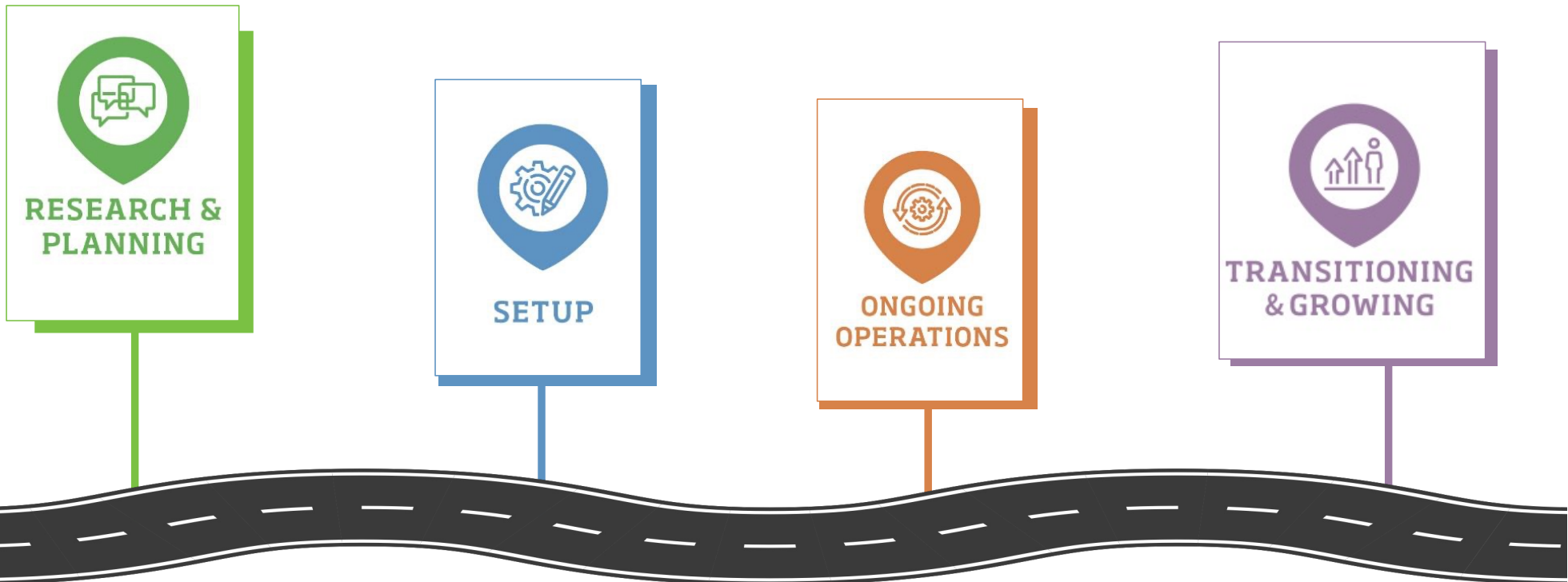
RUC State of Play in the U.S.



There are many paths states have taken to implementing RUC



The RUC Guide Provides Resources for Every Stage of Development



RUC Stages and Building Blocks

Building blocks provided for every stage of development



Stage 1: Research & Planning

- ➔ Research Policy & Politics
1 2 3 4 5 6 7 8
- ➔ Stakeholder & Public Engagement
9
- ➔ Study Organizational Structure & Readiness
10 11
- ➔ Demonstrate Possible Approaches
12 13 14 15 16
- ➔ Support Official Policy and Legislation Developmt
17 18



Stage 2: Setup

- ➔ Analyze Authoring Legislation
19 20 21
- ➔ Administrative Rules & Activities
22 23 24 25
- ➔ System Design
26 27 28 29 30 31 32 33 34
- ➔ Vendor Procurement
35 36 37
- ➔ System Implementation & Testing
38 39
- ➔ Organizational Design & Staffing
40 41 42 43 44
- ➔ System Launch
45 46



Stage 3: Ongoing Operations

- ➔ Live Operations
47 48 49 50
- ➔ Live Reporting, Evaluation, & Audit
51 52 53 54 55
- ➔ Live Enforcement
56 57 58



Stage 4: Transitioning & Growing

- ➔ Transition Strategy Development
59 60 61
- ➔ Transition Strategy Execution & Optimization
62 63 64 65 66
- ➔ Ongoing System Innovation
67 68
- ➔ Collaboration with Other Jurisdictions
69 70 71



Building blocks

RESEARCH AND PLANNING | SETUP | ONGOING OPERATIONS | TRANSITIONING AND GROWING

18

Support Policy and Legislation Development (18)

Description:

Supporting policy and legislative development is often necessary to create and pass RUC-enabling legislation. If RUC for commercial motor carriers is planned, separate legislation may be needed for those vehicles.

Details:

Successful bills have included provisions to:

- Create the RUC program and describe its relationship with gas tax.
- Empower agencies to carry out the RUC program.
- Enable the desired vendor market—either through direct procurement, potentially leading to certification, or an open market when the program is sufficiently large.
- Enable enforcement by lead RUC agency.
- Direct funds collected to flow to state treasury.
- Call for oversight and evaluation of the live program.

Primary Use:

Pass RUC-enabling bill.

Best Practices/Lessons Learned:

- Privacy provisions must be included in the bill.
- Legislative champion must understand policy and politics and use as needed to pass the bill.
- Taxes may require a supermajority vote; fees may require simple majority.
- Governors can veto bills, so it is important to have the governor's support.
- Enabling legislation must direct RUC revenue to a specific use. Unless revenue uses are already constitutionally prescribed, policymakers have choices. Public acceptance tends to improve when RUC revenue is dedicated to investment in roads. Other options for this policy choice are available, including other transportation modes, ancillary transportation investments (such as charging stations for electric vehicles), and general uses.

State Government Context and Assumptions:

Legislators and legislative champions complete this task with lead RUC agency and task force support.





Who Should Use the RUC Guide?

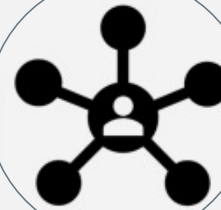
The RUC Guide is customized for different users:



**Lead RUC
Agencies**



Policymakers



**Communications
Professionals**



**Transportation
Professionals**

Self-Assessment Part 1

Assessing RUC Stage

SELF-ASSESSMENT PART 1: RUC Stage

Please choose the answers that best describe your state's current environment. When you finish, you will be directed to a page where you can explore your RUC stage.

Is there existing legislation authorizing a RUC program?

☒ YES

☐ NO

Do you have an operational RUC program?

☐ YES

☒ NO

Are you looking to expand an existing RUC program?

☐ YES

☒ NO



RESEARCH & PLANNING



SETUP



ONGOING OPERATIONS



TRANSITIONING/
GROWING

Thanks for taking Part 1 of the Lead RUC Agency Self-Assessment!

Based on your answers, we think you are in the [Setup](#) stage. The activities and building blocks that are useful for moving RUC forward are shown below. Explore this stage components by clicking on the building blocks you'd like to learn more about.

Once you are ready to move on, continue on with [Part 2](#) and [Part 3](#) of the self-assessment.

Activities	Building Blocks
Analyze Authorizing Legislation	(19) Analyze Bill Language and Testimony (20) Fiscal Impact Analysis (21) Develop Messaging Strategy and Materials for Live Program
Administrative Rules & Activities	(22) General Administrative Rules (23) Rate Calculation (24) Enforcement Design (25) Interagency Agreements
System Design	(26) System Needs Assessment (27) Concept of Operations (28) System Design Documents (29) Customer Service Requirements (30) Customer Service Standard Operating Procedures & FAQs (31) Customer Service Setup (32) Establish Business Rules and Operational (33) Determine Evaluation Metrics (34) Program Evaluation Reporting
Vendor Procurement	(35) Determine Use of Account Manager and Vendor Procurement Strategy (36) Initiate Certification Structure (37) Vendor Procurement

Self-Assessment Part 2

RUC Considerations

My agency has existing vehicle safety and/or emissions inspections

YES

NO/UNSURE

Vehicle safety or emissions inspections could be leveraged for a RUC by using the inspection data for RUC recording, reporting, and true-up. This would work particularly well for states that have an annual safety inspection that already includes odometer data collection because minimal changes would be required to existing processes.

Vehicle inspection requirements vary widely across the states, including the type of inspection, frequency, subject vehicles, and data collected. This guide focuses on whether the various existing state vehicle inspections can be leveraged for RUC. To evaluate this, inspections were sorted into the following categories:

- Odometer reading collected via annual safety inspection
- Emissions inspection required for all vehicles
- Emissions inspection required for most vehicles
- Emission inspection required for <50% of vehicles
- No or insufficient safety or emissions inspection for RUC

As of 2022, 14 states required annual safety inspections where the vehicle's odometer reading is collected as part of the inspection. Eighteen states either do not have any vehicle inspections, or have inspections that are insufficient for the purposes of RUC due to the infrequency of inspections and/or minimal vehicles subject to the inspections.

In states where they are required, emissions inspections are typically required every other year. New Jersey, Connecticut, and Washington, D.C., require emissions inspections for all vehicles, whereas other states with vehicle emissions inspections only require them for a geographical subset of vehicles. For states requiring emissions inspections for a geographical subset of vehicles, the utility of the inspections for RUC collection will vary based on the percentage of vehicles covered.

Additional RUC reporting options will need to be offered for vehicles not subject to vehicle inspections or in the years when a vehicle inspection is not required.

Check out the following building blocks to learn more:

Functional Analysis of Existing State Agencies' Organizations

Analysis and Prioritization of Mileage Reporting Methods

Yes or no/unsure questions around key RUC-related considerations

SELF-ASSESSMENT: PART 2 – RUC Considerations

These considerations and associated RUC building blocks may apply based on your Self-Assessment. Expand to learn more about these factors. Answer each of the following questions to learn about factors that may affect your state.

My agency has electric vehicle (EV) adoption goals and/or gasoline-powered vehicle limitations, or other clean energy policies that may impact clean vehicle adoption

YES

NO/UNSURE

My agency has weight-mileage taxes and/or special registration fees for certain vehicles like electric vehicles (EVs) and/or trucks.

YES

NO/UNSURE

My agency has recently completed public education and/or public opinion research about transportation funding

YES

NO/UNSURE

My agency has conducted a RUC pilot

YES

NO/UNSURE

My agency is a member of a multi-state RUC consortium

YES

NO/UNSURE

My agency restricts how transportation-related revenue can be spent

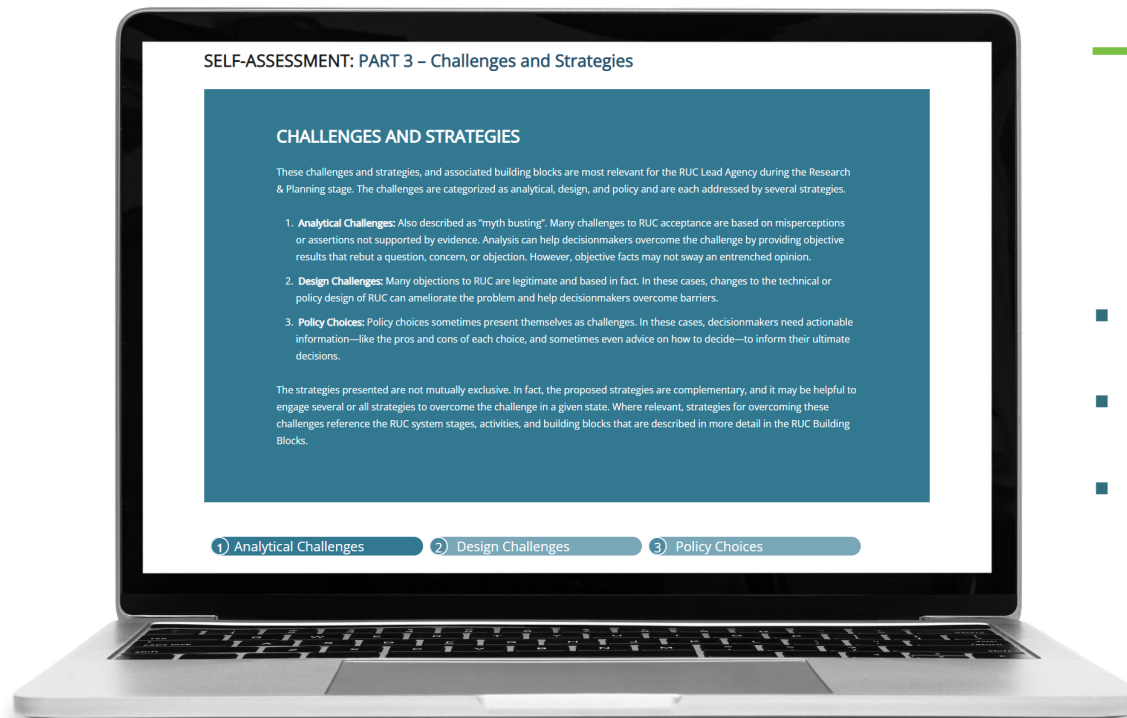
YES

NO/UNSURE

Results provide detailed information and guidance on specific building blocks

Self-Assessment Part 3

Challenges and Strategies



— **Challenges and strategies, geared toward RUC Lead Agencies covering the following topics:**

- Analytical challenges
- Design challenges
- Policy choices

Key Technical Building Blocks for Setup

⇒ Analyze Authoring Legislation

19 20 21

⇒ Administrative Rules & Activities

22 23 24 25

⇒ System Design

26 27 28 29 30 31 32 33 34

⇒ Vendor Procurement

35 36 37

⇒ System Implementation & Testing

38 39

⇒ Organizational Design & Staffing

40 41 42 43 44

⇒ System Launch

45 46

26 System Needs Assessment

27 Concept of Operations

28 System Design Documents

29 Customer Service Req's

30 Customer Service SOPs

31 Customer Service Setup

32 Establish Business Rules and Operational Policies

33 Determine Evaluation Metrics

34 Program Evaluation Reporting

From Planning to Policy: Enacting RUC legislation in Hawai'i



A focus on **robust stakeholder outreach**.



Regular communication and briefings with elected officials.



Built **strong foundation** for system design.



Developed **legislation for a small-scale program**.

Research and Planning Building Blocks



Stage 1:
Research
& Planning

➔ Research Policy & Politics

1 2 3 4 5 6 7 8

➔ Stakeholder & Public Engagement

9

➔ Study Organizational Structure & Readiness

10 11

➔ Demonstrate Possible Approaches

12 13 14 15 16

➔ Support Official Policy and Legislation Development

17 18

1 Determine Vision and Policy Objectives for RUC

7 Economic Forecasts

8 Revenue Modeling

11 Functional Analysis of Existing State
Agencies' Organizations

17 Estimate Cost of Implementation

18 Support Official Policy and Legislation
Development

Vermont

1 7 8 11 17 18

Key Focus Areas for Hawaii RUC implementation...

Setup from: 2023–2025



- How to communicate the choice between RUC and flat fee
- Coordination with DMVs on changes due to RUC program
- Developing the Concept of Operations, Systems Requirements, and Business Rules
- What will the July 1, 2025 launch look like

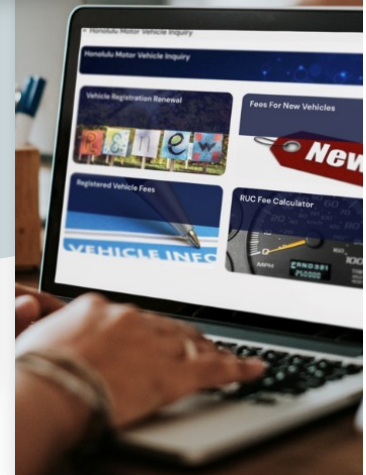
9 21

26 37 42

27 28 32

45

RUC Guide
Building
Blocks



Setup: Technical and Administrative Focus



SETUP

DEPARTMENT OF TRANSPORTATION

Adoption of Chapter 19-153
Hawai'i Administrative Rules

(Adoption Date)

1. Chapter 19-153, Hawai'i Administrative Rules,
entitled "State Mileage-Based Road Usage Charge", is
adopted to read as follows:

"HAWAI'I ADMINISTRATIVE RULES

TITLE 19

DEPARTMENT OF TRANSPORTATION

SUBTITLE 4

HIGHWAYS DIVISION

CHAPTER 153

STATE MILEAGE-BASED ROAD USAGE CHARGE

Subchapter 1 General Provisions
§19-153-1 Purpose
§19-153-2 Definitions
§19-153-3 Scope of chapter

Subchapter 2 Calculation of Road Usage Charge

22

Administrative Rules



Hawai'i Road Usage Charge (HiRUC) Concept of Operations

Prepared for:



Prepared by:

**CDM
Smith**

July 2024

27

Concept of Operations



Business Rules Document (BRD)

Prepared for:



Prepared by:

**CDM
Smith**

32

Business Rules

Setup: Communications Materials and Messaging




Hawai'i Road Usage Charge (HiRUC) Program

What is the Hawai'i Road Usage Charge Program?

- A road usage charge, or RUC, is a per-mile fee that drivers pay instead of fuel taxes. **The Hawai'i State Road Usage Charge (HiRUC) Program will begin on July 1, 2025 for eligible electric vehicle (EV) drivers only.**

How will HiRUC work?

- Mileage data for HiRUC will be collected through the state's annual vehicle inspection program.
- Eligible EV drivers will have a choice at the time of their car registration:

Pay per mile driven
\$8 per 1,000 miles
(capped at \$50)

OR

Pay a \$50 flat
annual RUC

Learn more!
Visit www.hiruc.org and try the HiRUC estimator tool to calculate your estimated annual RUC cost.







DMV Lobby Flyer

Fact Sheet

DMV Lobby Slides


Hawai'i Road Usage Charge (HiRUC)

What is RUC?

A road usage charge (RUC) is a per-mile fee drivers pay to fund roads and bridges.



www.hiruc.org

Hawai'i Road Usage Charge Program

Hawai'i RUC Update

- In August 2022, the Hawai'i Department of Transportation (HDOT) released a final report with results and findings from the Hawai'i Road Usage Charge Demonstration Project (HiRUC). This report summarized several years of research, including a year-long demonstration pilot.
- Based on these findings, HDOT recommended to the Governor and State Legislature that Hawaii develop a small-scale RUC program for electric vehicles as a first step in the gradual transition away from the state gas tax.
- In 2023, the Hawai'i State Legislature passed, and the Governor signed, Senate Bill 1534, which creates a small-scale RUC program for electric vehicles and requires Hawaii DOT to develop a plan to transition all vehicles to a RUC by 2033.

What is RUC?

- A road usage charge or RUC is a per-mile fee drivers pay to fund roads and bridges.
- A RUC will replace the gas tax and ensures a fair, long-term, and sustainable funding approach as gas tax revenues decline based on increasing high fuel economy vehicles, hybrids, and EVs.

Why is RUC important?

- Hawaii's gas tax currently provides a significant portion of revenue to fund the state's road and bridges.
- Hawaii is a leader in adopting EVs. As our state's cars become more fuel efficient or all-electric, revenues to maintain our roads will continue to decline.
- A gradual implementation of RUC helps ensure long-term, sustainable funding for Hawaii's roads.

How will RUC be implemented?




- Beginning July 1, 2025, drivers of EVs will have a choice whether to enroll in a per-mile RUC program – paying \$8 per 1,000 miles driven (\$0.8 cents per mile) – or paying a flat annual fee of \$50.
- Hawaii's RUC program will utilize the existing vehicle inspection program to report miles driven.
- Beginning July 1, 2028, the RUC program becomes mandatory for EV drivers.
- Hawaii DOT must develop a plan to transition all vehicles to RUC by 2033.

RUC Implementation Timeline

July 2023	Now Through July 1, 2025	July 1, 2025	July 1, 2028	2033
Gov. Josh Green signs Act 222 into law, establishing a road usage charge starting with EVs beginning July 1, 2025.	Mandatory vehicle safety inspections with odometer reading, \$50 EV fee.	Option for EV drivers to opt-in to RUC, capped at \$50 or pay a \$50 flat fee. Drivers that opt-in will pay less than a penny per mile.	RUC becomes mandatory for EVs.	Target date to extend all RUC to passenger vehicles. The plan must be submitted to the Legislature by December 2025.

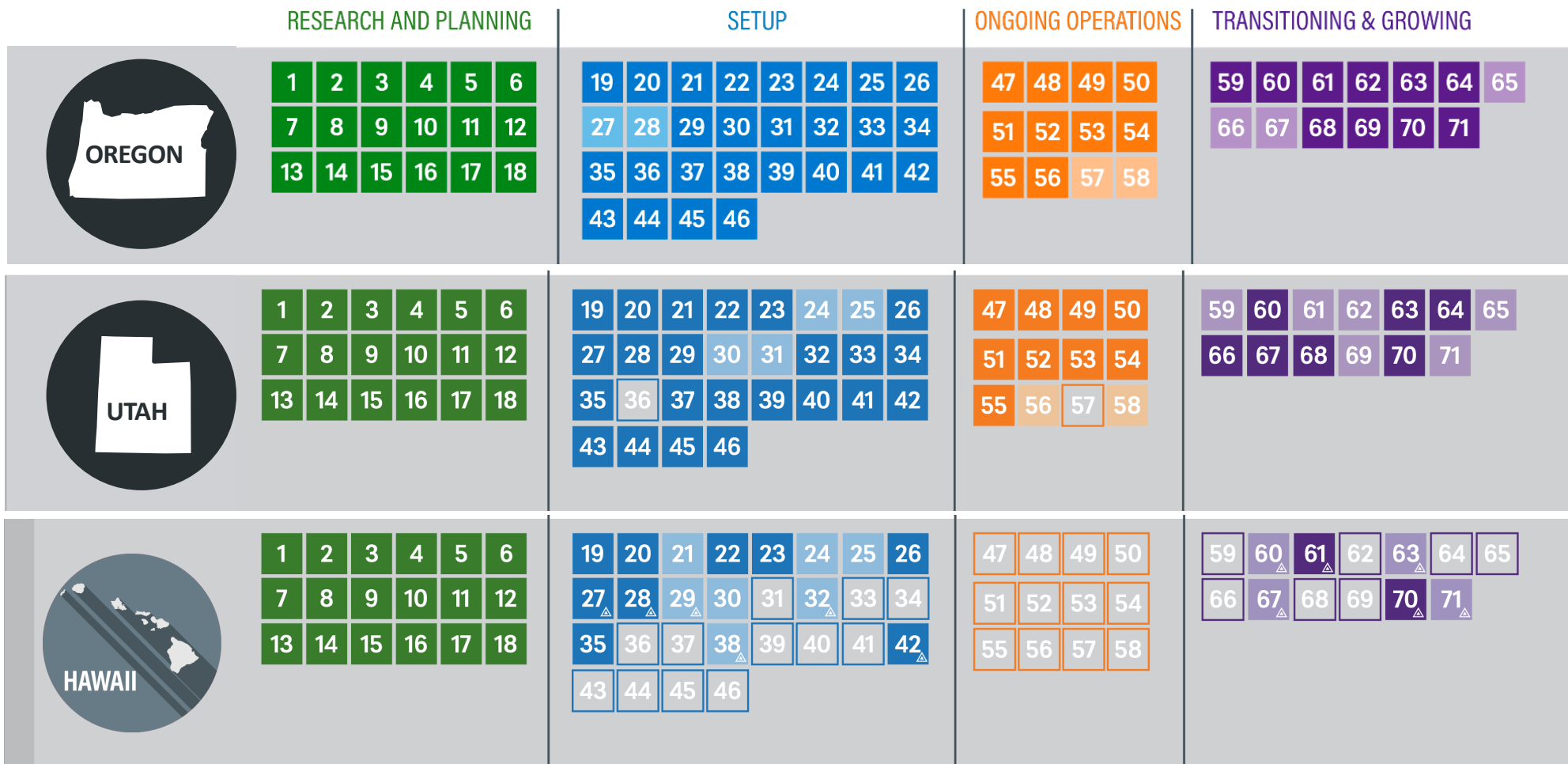
What is HiRUC?

- Since 2016, HDOT has been exploring a RUC as a fair, sustainable, and publicly acceptable gas tax replacement.
- In 2019, HDOT began the largest pilot project demonstration in the U.S. to date and released its final report in August 2022.
- In May 2023, Hawaii's State Legislature adopted a RUC for EVs beginning July 1, 2025.

www.hiruc.org February 2024

Building Blocks Used by State



Building Block Activity: ■ ■ ■ ■ None to light ■ ■ ■ ■ More substantial ■ ■ ■ ■ Most substantial

QUESTIONS?

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RUC Guide:



THANK YOU!