The following document is supplemental to *NCHRP WebResource 2: Road Usage Charge Guide* (NCHRP Project 19-18, “Transitioning Fuel Tax Assessments to a Road Usage Charge”). The full WebResource can be found at https://crp.trb.org/nchrpwebresource2/.

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Program Administration Cost

Description:

Key to establishing any revenue collection mechanism is to estimate and manage the cost of administration. For RUC programs, the cost of administration depends on a wide range of policy and system design choices. Analysis of costs can help to guide those choices as policymakers and administrators weight cost as one of the trade-offs.

As of 2022, little RUC cost data exists, and standard cost measurement techniques or unit cost estimates exist due to the small-scale nature of recently launched programs. As states begin to implement RUC programs, more detailed cost information will become available. For now, states must estimate their RUC costs on an ad-hoc basis based on decisions unique to each jurisdiction, drawing on available benchmark data from other states and the Federal government wherever feasible. A thorough documenting of anticipated program components and needs will allow states to consider the actual costs as programs emerge and evolve, impacting decisions about policy and system design.

Data Required:

Accurate assessment of costs requires details about the program functions, system design features, and policy features. Before estimating prospective costs of a RUC system, answers or choices for the following questions must be gathered:

- How will the RUC program be procured (fully state-run, outsourced to a single provider, outsourced to multiple providers in an open market, or a hybrid of these options)?
- Which agency or agencies will be involved in system operations (e.g., DMV, vehicle inspection, DOT)?
- What technologies will be relied upon for mileage data collection? Will multiple mileage reporting methods be offered?
- What costs will be covered by the implementing agency versus paid by end customers?

Most functions required to operate a RUC program already exist in state government. Specifically, motor vehicle agencies transact with vehicle owners frequently, in most states annually for registration renewal and collection of related motor vehicle taxes and fees. The costs of processing vehicle-related transactions can be gathered from state motor vehicle agencies and other entities involved in processing motor vehicle transactions. The transaction process should be broken down into component parts with associated data collected for each component, including: average processing times by transaction venue (e.g. online vs. in person), job classifications and labor costs, estimated level of effort for various functions per transaction or customer, and credit/debit card transaction fees (including flat fees per transaction and a percentage of transaction value).

In short, a RUC program can leverage existing motor vehicle transactions data as the basis (at least in part) for cost estimates. However, additional RUC program costs stem from functions that do not yet exist: collecting and verifying miles driven data, calculating RUC owed, and collecting the additional RUC amount due. To estimate these costs, states must survey the range of mileage reporting techniques and current industry costs associated with each. These costs evolve over time depending on the method.

Data Sources:

As of 2022, few RUC studies in the U.S. have yielded experience-based cost of collection benchmarks for RUC. Several active small-scale RUC programs are operating in the U.S. which may provide insight into program costs:

- ODOT's OReGO program (since 2015) – costs include commercial account manager reimbursements (40% of gross revenue collected) plus agency costs, which include personnel and direct costs.

- UDOT program (since January 2020) – estimated cost range of $50-100 per vehicle per year depending on the method selected.
- Virginia program (since July 2022) – no cost data available at this time.

In addition, Oregon's heavy-vehicle weight-mile tax costs are estimated at less than eight percent of revenue to administer and enforce.[2] The estimated cost for Waka Kotahi (New Zealand Transport Agency), to administer RUC is between 1.8% and 6%.[3]

Perhaps more relevant to states seeking data to estimate costs of a RUC program are existing data from each state's motor vehicle agency regarding vehicle transactions, supplemented by industry research into the costs of various technologies and methods for functions required that do not already exist in state government. Assembling these pieces allows the state to estimate the cost of operating a RUC program, and in turn to compare the lowest-cost option of state administration (a "public sector comparator") to any private sector offers.

Analysis Steps:

New program implementation costs

1. Based on the RUC policy choices and program design, identify specific functions and their corresponding cost elements such as labor (broken down by job classification), equipment (including IT), and other materials.
2. Based on the RUC policy choices, estimate the volume of vehicles subject to RUC over time and the amount the average vehicle would owe.
3. Source unit cost data for each cost element, incorporating factors for declining unit costs as volume increases.
4. Calculate total cost for any given set of policy and program design choices based on unit costs, volume of vehicles, and expected revenue.
5. Consider estimating uncollected RUC (due to errors, negligence, and evasion) as a separate category, as a function of policy and system design choices. Providing the cost of program administration and uncollected RUC estimates together can inform policy and design choices better than either alone.

Considerations/Lessons Learned:

Program administration costs are specific to the agency implementing the RUC program. Depending on administrator choices and the complexity of the program, the cost categories and structure can vary significantly. As such, agencies should thoroughly examine costs during the planning stages and then re-evaluate as the program grows and evolves over time to ensure costs are minimized.

Although most RUC programs and pilots to date have relied at least in part on automated mileage reporting, options exist for self-reporting of miles driven or verified odometer reporting leveraging other vehicle transactions processes. These options allow states the possibility to construct a public sector comparator, or estimate of what it would cost the state to take on implementation of a RUC program. Such estimates can serve as a benchmark for assessing the value of private sector involvement and trading off desirable features of automation (e.g., streamlined electronic records for mileage exemptions, increased accuracy of data) against the increased costs. With New Zealand's at-scale RUC program as a model and Hawaii's pilot program, it is conceivable for program costs in a state-run configuration to match those of vehicle transactions, in the range of 10% of revenue or less.

There are currently two firms certified to provide full-service account management to RUC programs in the U.S. As this space evolves and new vendors emerge, agencies should engage new companies to encourage

[2] This figure represents the budget of Oregon DOT's Commerce and Compliance Division, which includes weight-mile tax collection and enforcement as well as all other functions of the division.
[3] NCHRP Report 689: Costs of Alternative Revenue-Generation Systems. Transportation Research Board, 2011.

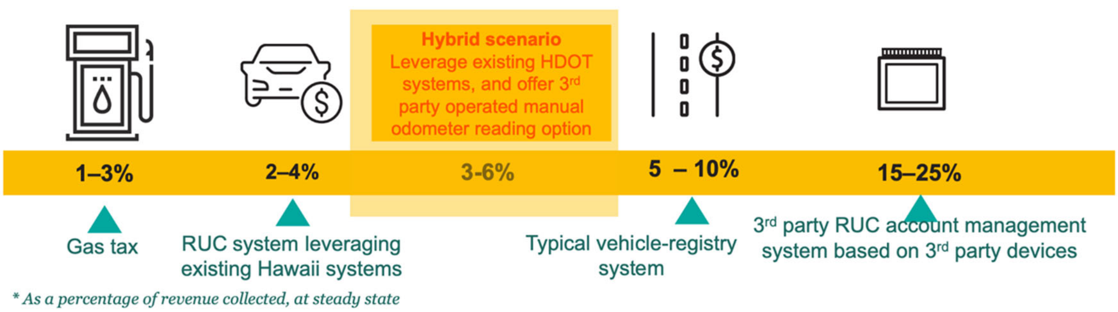
industry competition, innovation, and lower costs. As vendors are identified, cost information should be collected and shared among the industry to inform program administration cost planning.

Program administration cost estimation efforts will become more common as more agencies implement programs. Agencies new to the process should identify peer agencies that have already implemented programs for lessons learned and unit cost estimates.

Once a program goes live, the need for cost assessment does not end. New Zealand serves as an example of a jurisdiction with a mature RUC program that regularly reviews the effectiveness, including cost effectiveness, of policy and program design choices.

Sample Output

Hawaii's RUC pilot offered an opportunity to explore the possibility of leveraging existing state-run systems including vehicle inspection (where odometer readings are already collected and digitally stored) and vehicle registration transactions. As the graphic below illustrates from HDOT's RUC cost analysis, a RUC program that leverages existing systems can achieve costs as low a 2-4% of revenue at scale. A hybrid approach that offers a third party-operated manual odometer reading option could cost more (3-6% of revenue), while a third-party RUC account management approach would cost between 15-25%. This is an example of prospective cost estimates based on hypothetical system design and policy choices.



By contrast, New Zealand measures *actual* costs in its mature RUC system. As of fiscal year 2019, New Zealand's RUC program reported its cost of administration at $21.5 million per year, including collections, refunds processing, and investigations and enforcement. The annual reporting process includes performance measures for reducing costs, including unit transaction costs and percent of transactions conducted online. New Zealand generated $1,726 million in RUC revenue during fiscal year 2019 (from both light- and heavy-duty vehicles), for a cost ratio of 1.2%.[4]

[4] Waka Kotahi (New Zealand Transport Agency) Annual Report, 2019.