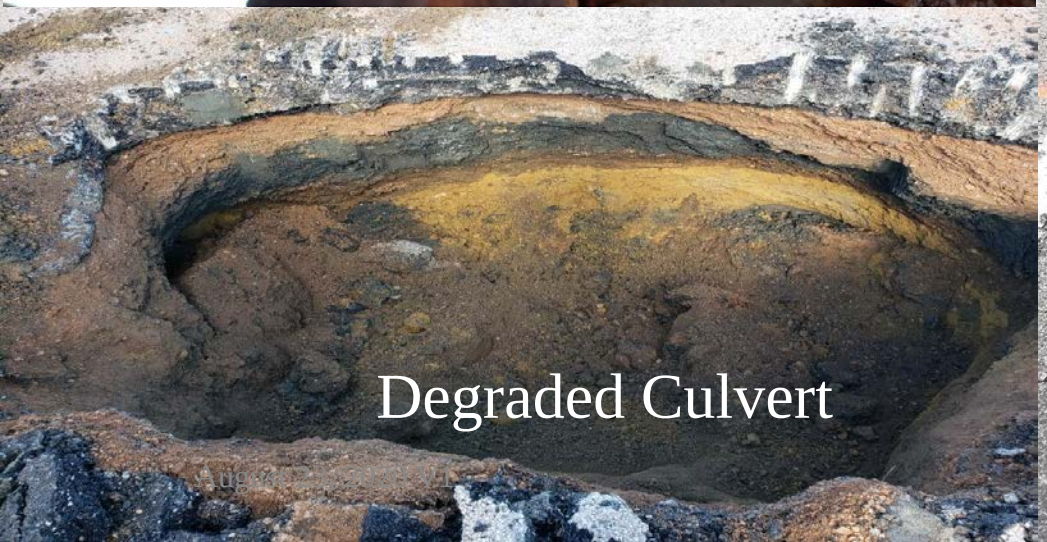
Wyoming Department of Transportation
Road Usage Charge Brief

Joint Transportation, Highways, & Military Affairs Committee
Video Conference
September 21, 2020
Version 2.0

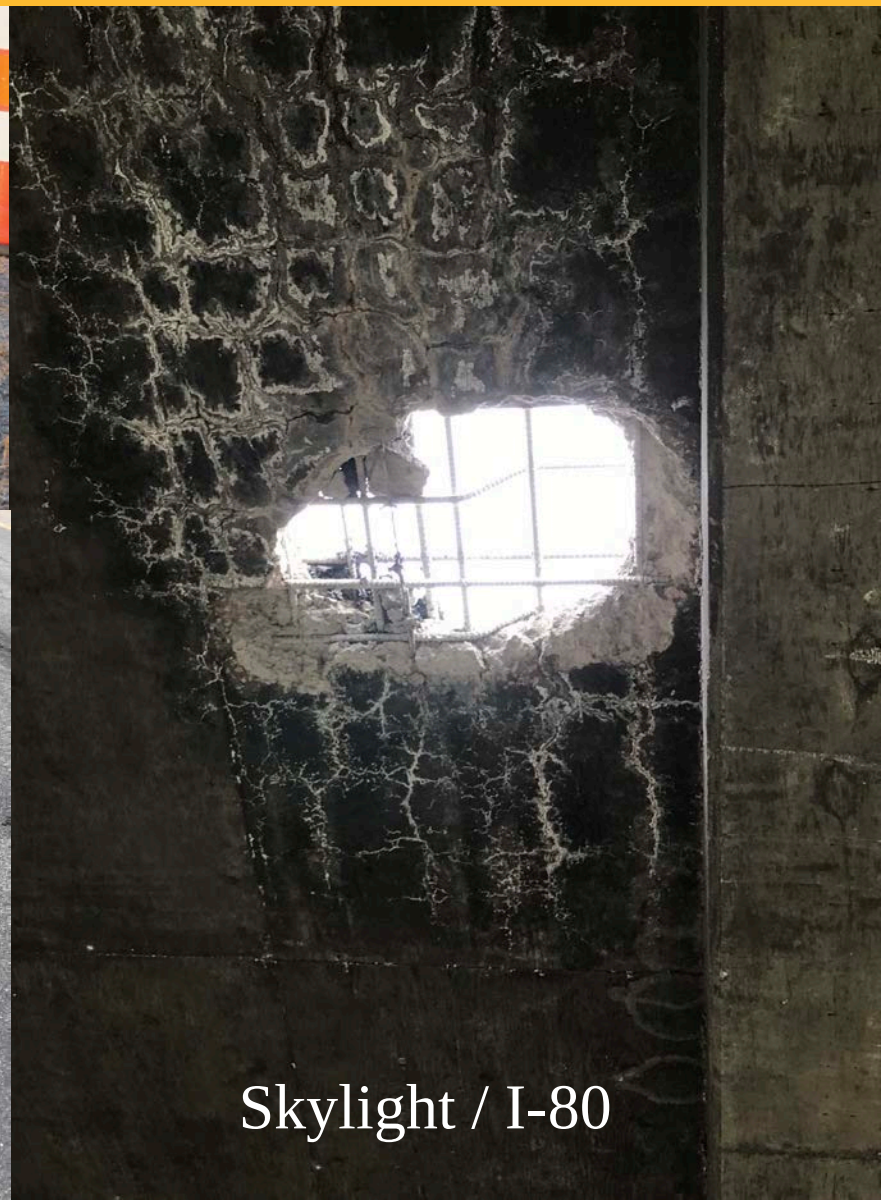
What is the Need ?


Snake River Bridge / WY 22


US 191


Degraded Culvert


I-80


Skylight / I-80

Agenda

- Challenges Faced
- Revenue Trends
- Highway Improvement Expenditures
- Budget Cuts Won’t Solve the Problem
- Highway System and Revenue Data
- Why a Road Usage Charge (RUC)
  - Alternate Sources Considered
  - Fuel Tax and Diminishing Returns
- What is a RUC
- RUC Misconceptions
- Ways to Report a RUC
- RUC System Components
- Key RUC Assumptions
- Potential Individual Costs
- Maximizing Out of State Revenue
- Simplifying RUC for the Customer
- Capturing the non-RUC User
- Road as a Utility
- Final Thoughts
- Questions

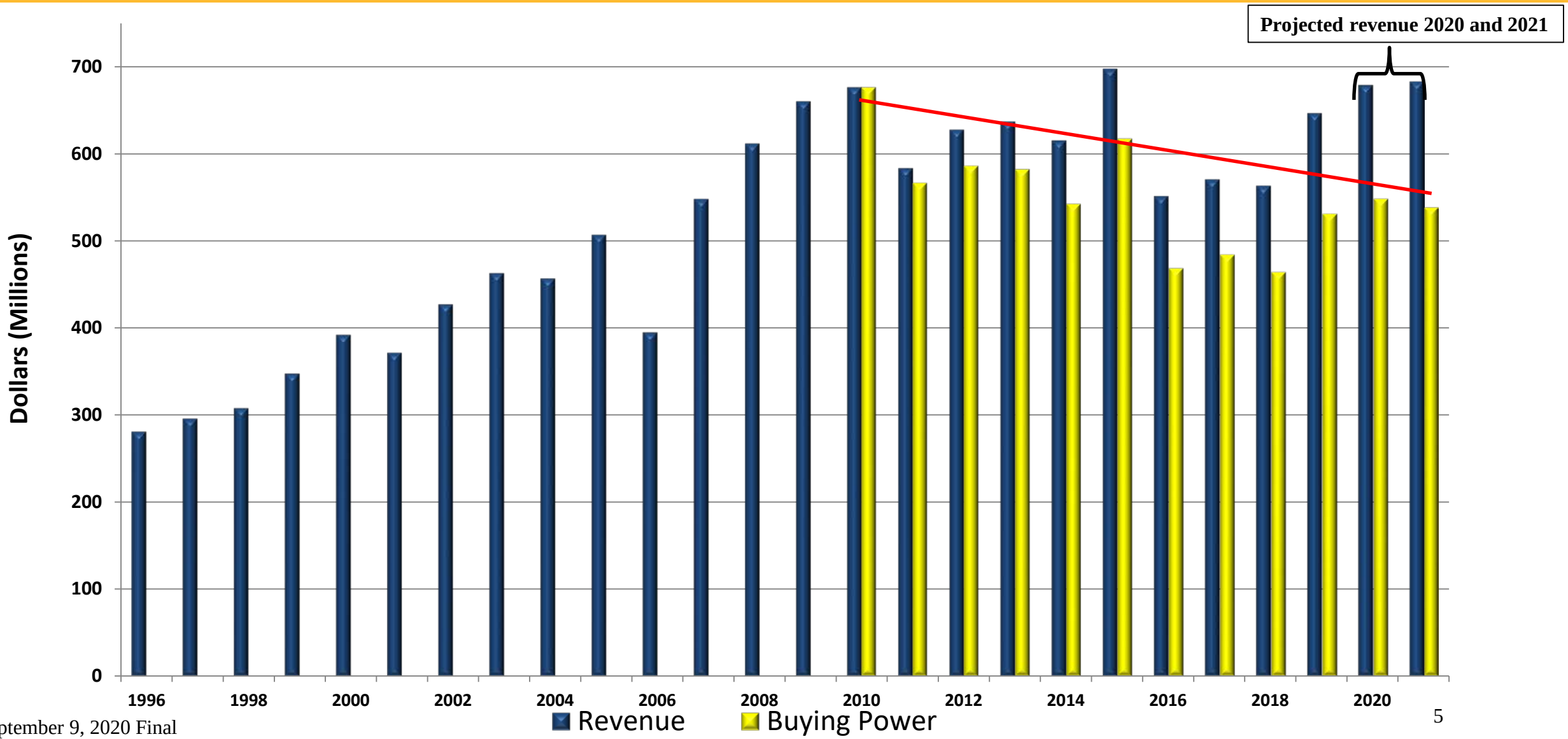
Challenges Faced

Current revenue sharing requires at least *$201.5 million* – Municipalities and Counties get $66.5 million

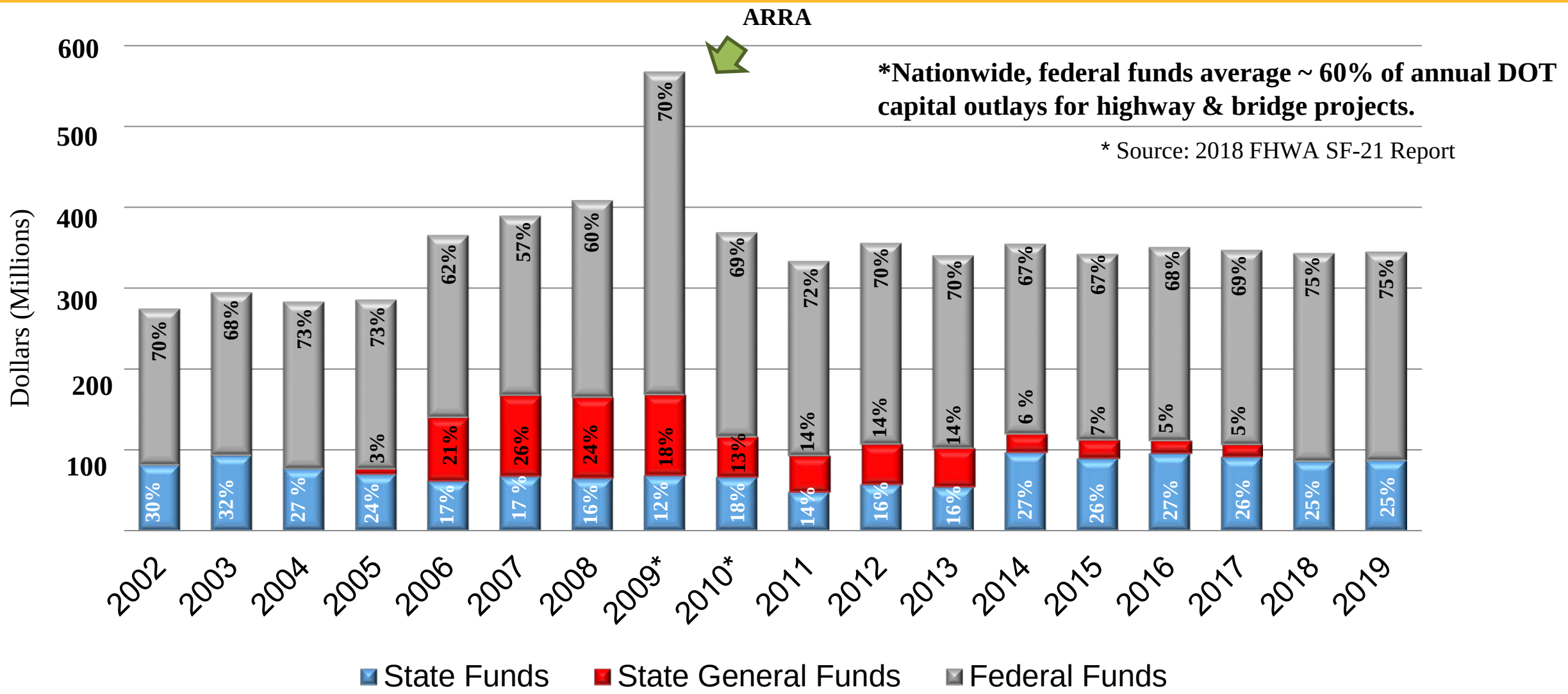
Current revenue projections suggest the continued statewide deterioration of highways and roads

- TRiP reports that
  - 34% of Wyoming's road are in poor / mediocre condition now
  - Road conditions cost Wyoming drivers an additional $587 / year in extra fuel and maintenance
  - 47% of Wyoming's bridges and 76% of Wyoming's interstate bridges are more than 50 years old
  - Wyoming ranks 3rd worst among states with interstate pavement in poor condition at 9 percent
- USA Today Report – Ranked Wyoming as 10th worst in Nation in terms of % of poor roads
- WYDOT has shifted to asset preservation

WYDOT Revenue Trend 1996-2021

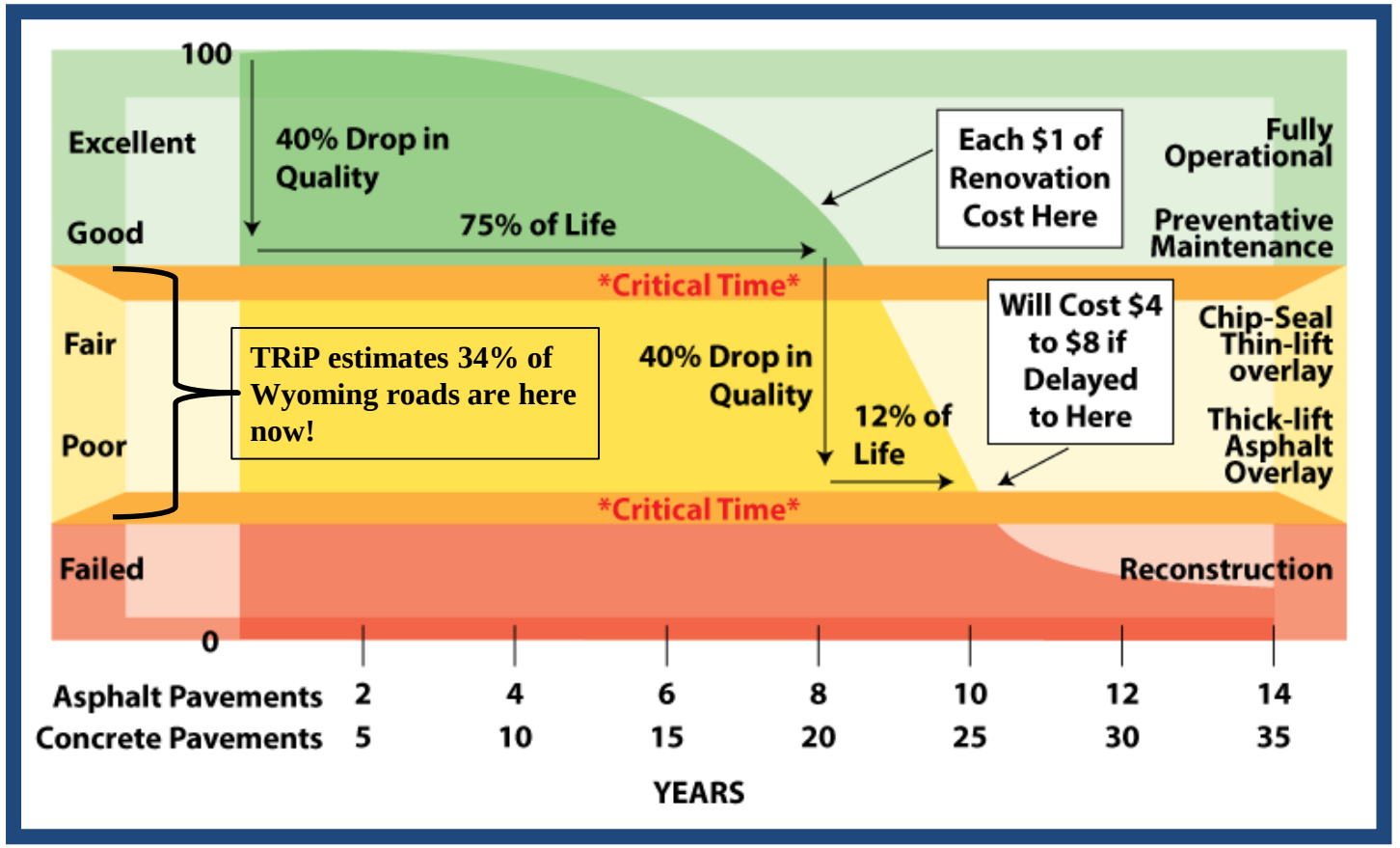


Highway Improvement Expenditures



Budget Cuts and Delays Won't Solve the Problem

- WYDOT reduced staff by 10% in the last 10 years
- Closed 10 Rest Areas = $790,000 / Year
- Delayed capacity improvement construction projects
- Delayed purchasing replacement vehicles
- Delayed facility maintenance



For every dollar not spent on timely preventive maintenance, $4 to $8 will be needed for complete reconstruction a few years later.

Wyoming's Highways at a Glance

Revenue must increase by ~ 115% more than the fuel tax provides to meet the need

2018 Mileage Data

- 10.4 B Vehicle Miles Traveled (VMT)
- 1.9 B by Heavy Trucks
- 8.5 B by Passenger Vehicles
- 7 B VMT is on WYDOT maintained roads and highways
- 85% of Passenger Vehicle VMT is from in-state registered vehicles
- 38% of Heavy Truck VMT is from in-state registered trucks

Revenue Data

- Fuel Taxes will raise ~ $175m in 2020
- WYDOT will keep ~ $114 m
- Diesel tax / gasoline tax revenue split = ~51% / 49%
- WYDOT keeps 75% diesel tax / 55% gasoline tax / ~67% all fuel tax revenue
- Vehicle Registration will raise ~ $86 million in 2020

Why a RUC?

Alternate Revenue Sources Considered

Sources with potential to raise $200 million - $400 million per year

1. Additional Fuel Tax
   - Need $.30 to $.50 more / gallon to meet requirement (increase from $.24 to $.54 - $.74)
   - MPG increases and conversion to electric vehicles will render it ineffective
2. Sales Tax
   - Not guaranteed for transportation
   - Competes as a revenue source for other state requirements

Other Alternate Sources Considered

1. Vehicle Registration Increase
   - Shifts tax burden from out-of-state to in-state payers
   - Get less than $1 million for each $1 increase
2. Vehicle Sales Tax
   - Shifts tax burden from out-of-state to in-state payers
   - 1% tax only results in $15 million

RUC

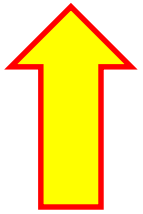
- **Does not rely upon fossil fuels**
- **Can adjust to charge more for vehicles that damage road surfaces**
- **Initially supplement fuel taxes and eventually replace them**
- **Potential to cover current and future revenue requirements**

Why a RUC?

Reliance on Fuel Taxes has Diminishing Returns

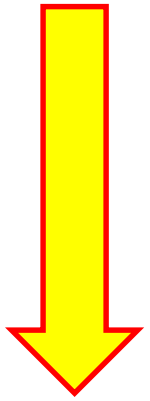
Increase in fuel-efficiency and electric vehicles use will reduce fuel tax revenue

- Since 2000 average Car MPG has increased 25% and average Pickup MPG has increased 14%
- Corporate Average Fuel Economy standards increase to 55.3 mpg for passenger cars and 39.3 mpg for light duty trucks by 2025
- Electric freight transports will reduce diesel tax income
- Large corporations, including oil and gas companies, are beginning to make zero carbon pledges – target is 2050 or earlier



Heavy Trucks and Tourism

Since 2010 miles traveled increased 9%



Since 2010 buying power decreased 19%

Inflation

What is a Road Usage Charge (RUC)

Charge based on miles traveled

- Treats roads like utilities (Pay what you use)
- Users pay a charge / mile traveled
  - Allows for user parity within a group – EV pays same as V8 powered sedan
  - Allows different group rates for vehicles that create more surface wear
- Can be supported using both technology and manual options
- Uses existing marketplace technology
- Can supplement and / or replace fuel taxes
- Provides long-term solution to transportation revenue challenges

RUC Misconceptions

Driver privacy is sacrificed

- Multiple tech and non-tech choices
- Unless explicitly authorized, State never receives personally identifiable info
- Privacy guaranteed by contract

Rural drivers are unfairly penalized as they drive longer distances

- Rural drivers actually drive less than suburban drivers
- RUC can credit travel on private lands/roads

Expensive to deploy and administer

- Higher volumes can reduce cost
- Consolidate services with other tech and account management companies

Doesn't WYDOT have enough funding already?!?!?

- Current funding model is unsustainable
- Independent needs study ongoing

Ways to Report a RUC

PLUG-IN DEVICES

Device plugs into vehicle's OBD-II port to capture and report RUC data. Both GPS and Non-GPS options

MOBILE APPS

Mobile apps use smartphone technology to collect RUC data

CONNECTED VEHICLE TELEMATICS

Connected vehicle sensors, systems, and apps collect and report RUC data

ODOMETER READ

Periodic odometer readings are captured through mobile apps, website uploads, or independent parties.

PERMIT BLOCKS

Prepaid RUC for time or mileage increments

RUC System Components

DATA COLLECTION

- Collects RUC-related data
- Sends data to Account Manager
- May also provide motorist services
- Removes Personally Identifiable Information (PII)

TRANSACTION PROCESSING

- Calculates per-trip RUC owed
- Aggregates calculated transactions into invoices
- Can calculate multiple rates based on policy decisions
- Creates financial reports

ACCOUNT MANAGEMENT

- Corresponds with RUC Payers
- Collects unpaid RUC
- Provides customer service
- Handles account disputes
- Offers value added services

FINANCIAL ENTITY

- Aggregates collected RUC
- Deposits paid RUC Treasuries
- May serve as financial clearinghouse
- Supports state financial audits

Key Assumptions for a Wyoming RUC

- All Wyoming Vehicles will be enrolled in RUC and out of state users will be offered the opportunity to join the program - there will be very few if any exceptions
- Rates will vary by category of vehicle (Motorcycle & ATV; Passenger Cars; Pickup & Van; 3 categories of truck – single unit, single trailer, multi-trailer)
- RUC charges will apply to all Municipal, County, and State maintained roads
- Revenue distribution would mirror that in place for fuel tax
- Various mileage collection options will be offered - technical solutions managed by third parties to avoid any potential privacy issues
- Seek to maximize out of state contributions
- Out of state road users will pay the current fuel tax plus an extra “RUC parity charge”
- RUC users will receive fuel tax / parity charge credits for miles driven on Wyoming’s public roads

Potential Book End Costs

What 3 Typical Wyoming Driver's ***Might*** Pay

Current annual revenue = $174 million / Require at least $375 million (115% increase)

Ave Car (DOE Report)
- **11470 Miles**
- **24.2 MPG**
- **$113.16 State Fuel Tax**
- **RUC Rate = $.01 / Mile**

Meet the Requirement
- ***$243.29 State Fuel Tax***
- ***RUC Rate = $.021 / Mile***

Ave Pickup (DOE Report)
- **11550 Miles**
- **17.5 MPG**
- **$158.40 State Fuel Tax**
- **RUC Rate = $.013 / Mile**

Meet the Requirement
- ***$340.56 State Fuel Tax***
- ***RUC Rate = $.029 / Mile***

Ave Class 8 Truck (DOE Report)
- **62517 Miles**
- **5.29 MPG**
- **$2836 State Fuel Tax**
- **RUC Rate = $.045 / Mile**

Meet the Requirement
- ***$6097.40 State Fuel Tax***
- ***RUC Rate = $.098 / Mile***

Gasoline Revenue = 49% ($85 million to $184 million)

Diesel Revenue = 51% ($89 million to $191 million)

For illustrative purposes only - Actual RUC Rates may be higher or lower
RUC Rates assume all fuel tax is credited and does not include RUC Administrative Costs
RUC Rates assume desire to keep same portion of income between heavy trucks and passenger vehicles
RUC Rate may be reduced by use of alternate funds to reach $201.5 million in additional income

Maximizing Out of State Revenue

- RUC and RUC “Parity Charge” implemented at the same time
- RUC Parity Charge occurs at the pump and equates to the same increase a RUC customer pays in their per mile rate (for that type of vehicle)
- To keep RUC revenue neutral, the RUC rate is set at the comparable fuel tax rate and there is no RUC Parity Charge at the pump
- To raise some revenue and the burden to non-RUC customers the RUC Parity Charge could be set higher than a comparable RUC per mile rate
- To raise the full required amount, the RUC rate could be set at 115% more than the current comparable fuel tax rate and the RUC Parity Charge is set at 115% of the current fuel tax
- RUC Customers receive a credit for all fuel taxes and RUC Parity Charges they pay at the pump on their RUC invoices

Simplifying RUC for the Customer

Examples of RUC Invoices

Statement Period: January 1, 2020 – January 31, 2020
Account # 123-456-789

Notional Monthly Invoice

2015 Chevrolet Cruze	EPA Reported MPG = 30
License Plate Number	RUC Rate = $.01/mile
	State Fuel Tax = $.24/gallon

Taxable Miles	Fuel Used
350	11.67 gallons
Mileage Cost	Fuel Tax Credit
$3.50	$2.80

Road Usage Charge Due
$.70

September 9, 2020 Final

RUC Renewal (Registration)
Account # 123-456-789

Notional Permit Invoice

2015 Chevrolet Cruze	EPA Reported MPG = 30
License Plate Number	RUC Rate = $.01/mile
	State Fuel Tax = $.24/gallon

Purchased Miles	Fuel Used
10,000	333.33 gallons
Mileage Cost	Fuel Tax Credit
$100	$80

Road Usage Charge Due
$20

Capturing the Non-RUC User (An Example)

Illustrative RUC and RUC Parity Rates

To Achieve RUC / Fuel Tax cost parity fuel taxes must increase at the same amount as RUC rates.

→ **No Rate / Revenue Increase**

Fuel Tax = $.24 / Gallon
RUC Parity = $0
Car RUC = $.01 / mile
Pickup RUC = $.013 / mile
Truck RUC = $.045 / Mile
Total Revenue = $174 million

→ **RUC Parity Charge = 115%**
RUC Increase = 115%
Revenue Increase = $201 Million

Fuel Tax = $.24 / Gallon
RUC Parity Charge = $.276 / Gallon
Car RUC = $.021 / mile
Pickup RUC = $.029 / mile
Truck RUC = $.098 / Mile
Total Revenue = $ 375 million

Increasing Fuel Taxes more than RUC rates will shift tax burden from RUC Customers (in-state) to non-RUC Customers (mostly out-of-state)

→ **RUC Parity Charge = 50% Increase**
RUC Increase = 25% Increase
Revenue Increase = ~$60.9 Million

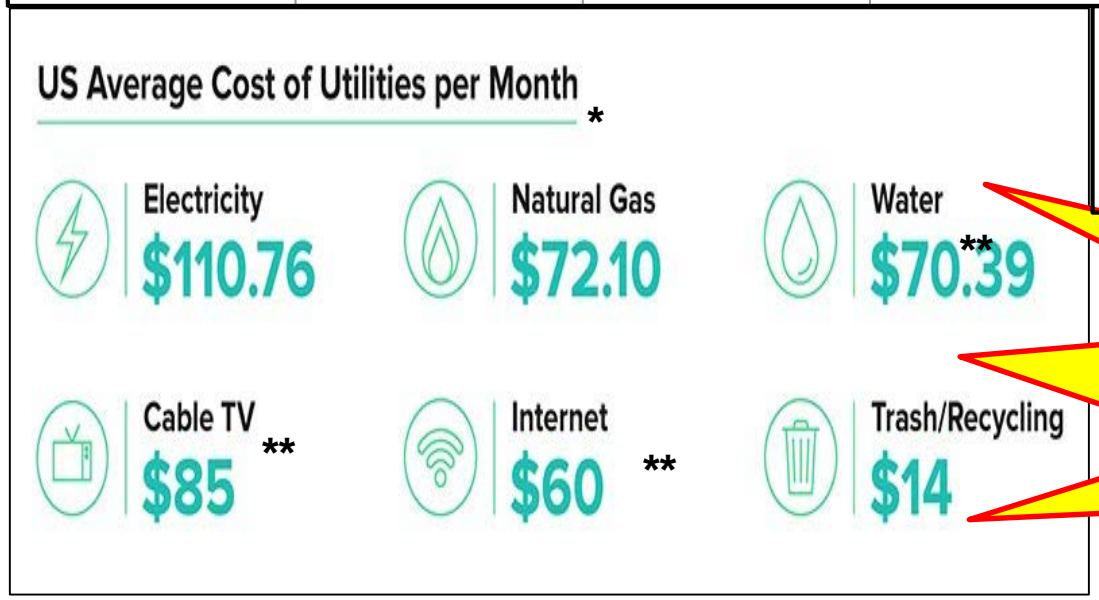
Fuel Tax = $.24 / Gallon
RUC Parity Charge = $.12 / Gallon
Car RUC = $.0125 / mile
Pickup RUC = $.01625 / mile
Truck RUC = $.05625 / Mile
Total Revenue = $234.9 million

Fuel Pump Images Courtesy of Freeimages.com

Roads as a Utility

Individual Perspective (Utility Cost / Month)

Rank	State	Electricity	Natural gas	Water **	Internet **	Cable **	Monthly Total
* 42	Wyoming	$97.10	$55.45	$70.39	$60.00	$85.00	$367.94



Treating roads like a utility and funding the known requirement at **~$375 million** would conceptually cost (see illustrative numbers on Slide 17):

Car Operator = $20.27 / month
Pickup Operator = $28.38 / month

* Source: Move.Org at https://www.move.org/utility-bills-101/#:~:text=How%20much%20is%20the%20average,in%20some%20states%20than%20others

** Source data reports the same number for all states and the national average

Roads as a Utility
Final Thoughts

- Long-term reliance only on fossil fuel taxes is not sustainable
  - We recommend a RUC and fuel tax increase to meet today's need
  - Within group parity eliminates no / lower payment for more fuel efficient vehicles that use road / bridges the same
  - RUC captures in-state users, a fuel tax increase captures out-of-state users that choose not to sign up for the RUC until a national program is established
- It will take an increase of at least ~115% increase in revenue to fix the problem today
  - If we delay, costs will rise exponentially while service reductions and road conditions may negatively impact our economic viability
    - It is fiscally conservative and responsible to maintain Wyoming's transportation assets
  - No User pays both, RUC customers receive fuel tax / charge credits
  - To maximize out of state users a RUC Parity Charge is added at the pump
  - Use of other revenue mechanisms shifts burden to residents
  - Even with more than doubling charges, road maintenance costs are a bargain when compared to other utilities at <$30 / month for the non-truck individual user

Questions?