2024 IRP Working Group

Meeting 10: May 13-14, 2024
Nashville, TN

TVA — TENNESSEE VALLEY AUTHORITY

Welcome and Safety Moment

Jo Anne Lavender; IRP Facilitator
Hunter Reed, IRP Project Manager

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Safety Moment

EMERGENCY ACTIONS

In case of Building Emergency
Exit right out of the conference room doors, go down the hall and down the stairs to the lobby, and gather in the parking lot

In case of Severe Weather
Exit right out of the conference room doors, go down the hall and down the stairs to the basement

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Agenda – May 13, 2024

Topic	Time (CT)	Presenter(s)	Notes
Lunch	11:00-12:00		
Welcome	12:00-12:10	Jo Anne Lavender	
Opening Remarks	12:10-12:20	Brian Child	
Final GHG Rule Updates	12:20-1:20	Maria Gillen	
Break	1:20-1:35		
Financial Plan Update	1:35-2:30	Brian Child	
NREL GHG LCA Update	2:30-3:30	Dr. Garvin Heath (NREL)	Update on NREL's partnership with TVA on the greenhouse gas life cycle analysis
Break	3:30-3:45		
EV Program Updates	3:45-4:45	Ryan Stanton	
Wrap-up	4:45-5:00		
Off-site dinner	6:00-8:00		

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Opening Remarks

Brian Child; Vice President, Enterprise Planning

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Final Greenhouse Gas Rule Updates

Maria Gillen; Director, Environment and Energy Policy

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E&EP Team Overview

Environment & Energy Policy

A Trusted Partner

Inform Carbon Position
Report TVA's progression to Net Zero Carbon Emissions and provide insight on the drivers

Provide Sustainability & Climate Vision
Ensure TVA is a sustainable, resilient company that is aligned with sustainability frameworks and industry peers

Advise Planning & Operations
TRACK, ANALYZE, COMMENT, COMMUNICATE regulatory changes to INFORM TVA operations

Continuous Improvement Framework
Improve TVA's environmental footprint through a strong Environmental Management System and Continuous Improvement Teams

Communicate Across TVA
Educate and Engage throughout TVA on policy matters through various communications

Lead Valley Pathways Study
With the UT Baker School and Valley-wide Stakeholders, study various pathways toward a Valley-wide net zero economy

Reporting & Disclosures
SEC Reports, Climate Adaptation, Sustainability, Carbon

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Final GHG Rules – April 2024

Amends the New Source Performance Standard for greenhouse gas emissions from new fossil fuel-fired stationary combustion turbines. Repeals the Affordable Clean Energy Rule and amends emission guidelines for GHG emissions from existing fossil fuel-fired steam generating EGUs.

Does not finalize standards for existing combustion turbines; will issue these standards in future rulemaking.

The Final Rule includes:

- Three subcategories for existing coal based on retirement dates

- Three subcategories for new gas based on capacity factors (CF)

- Includes reliability mechanisms

  o Short term mechanism – allows Existing and New Sources noncompliance during an event of an extreme, unforeseen circumstance (e.g., Winter Storm Elliot)

  o Long term mechanism – allows up to 1-year extension for existing units that intend to cease operating, but need to remain online temporarily to address reliability concerns and for unanticipated delays with control technology

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Regulatory Programs / Existing Coal

For EXISTING Coal Generation (111d)	EPA's Proposed "Best System of Emission Reduction" (BSER)
Must commit to retire by January 1, 2032 (near term)	Exempted from rule (no BSER operating limits) if formally committed to retire
If formally commit to retire by January 1, 2039 (medium term)	BSER is co-fire 40% NG to achieve 16% CO_2 reduction by January 1, 2030
If operating beyond January 1, 2039 (long term)	BSER is to achieve ~90% CO_2 reduction through Carbon Capture & Storage (CCS) by January 1, 2032

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Regulatory Programs / New Gas Turbines

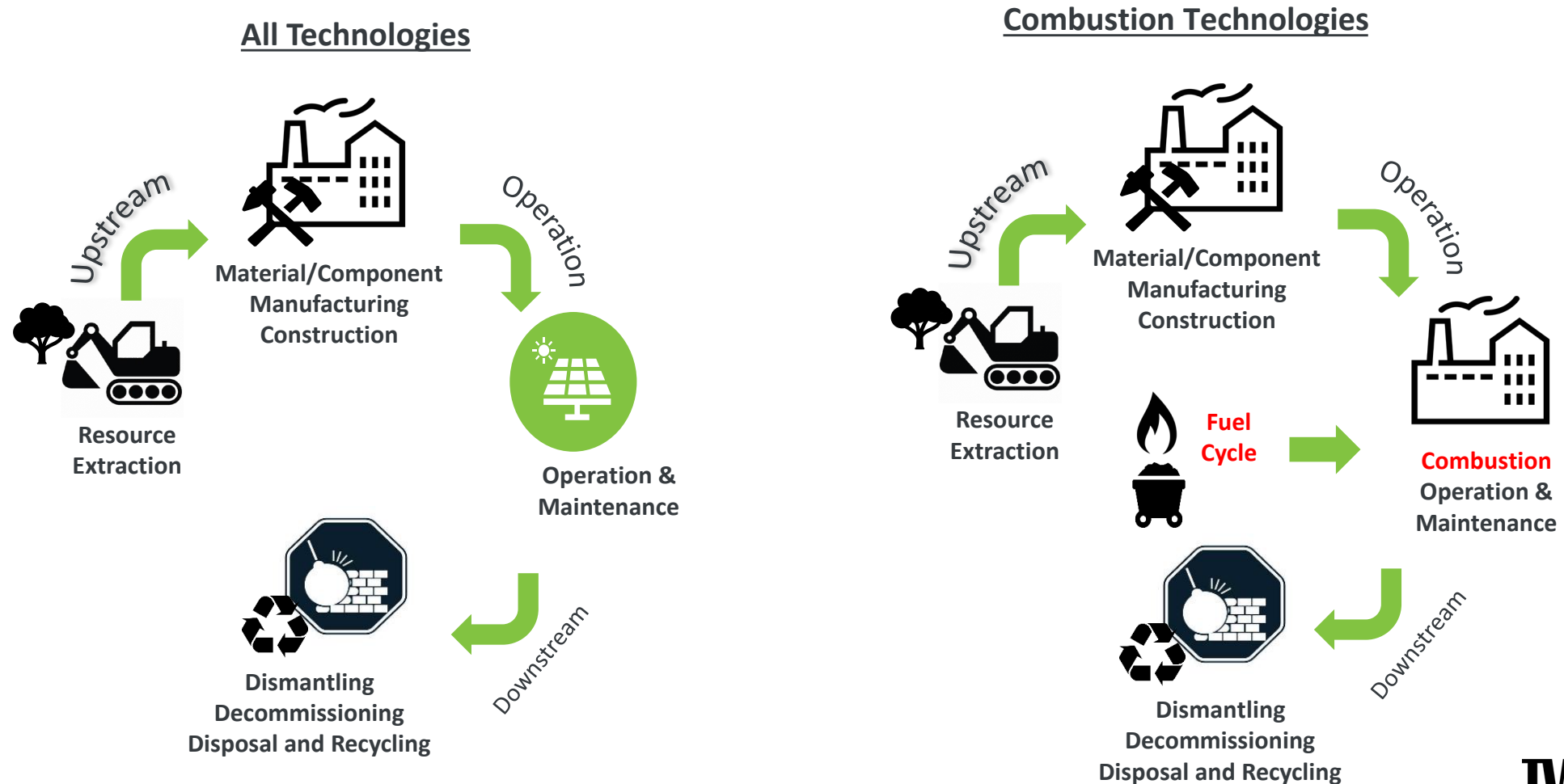| For NEW Gas Generation (111b)	EPA's Proposed "Best System of Emission Reduction" (BSER)
Low Load Units (less than 20% CF)	BSER is firing NG and distillate fuels achieving rates ranging between 120-160 lbs/MMBtu (clean fuels: pipeline natural gas, ultra low sulfur diesel)
Intermediate Units (all new turbines operating more than 20% CF, but less than 40%)	BSER is high efficiency combustion turbine technology ; By Final Rule Date – BSER is 1,170 – 1560 CO_2 lbs/MWh-gross
Base-Load Units (all new turbines operating more than 40% CF)	Phase I (requiring HRSG) BSER is the use of high-efficiency combined cycle technology in combination with the best operating and maintenance practices with a standard of 800-1280 CO_2 lbs/MWh-gross. Phase II (requiring CCS) Beginning January 1, 2032, 90% Carbon Capture with a standard of 100 -150 CO_2 lbs/MWh-gross

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Break

Financial Plan Update

Brian Child; Vice President, Enterprise Planning

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NREL Greenhouse Gas Life Cycle Analysis Update

Garvin Heath, PhD; Principal Environmental Engineer and Distinguished Member of the Research Staff, NREL
Hunter Reed; IRP Project Manager, TVA

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The Life Cycle for Electricity Generation Technologies: Quantifying Attributable Impacts

All Technologies

Upstream

Material/Component Manufacturing Construction

Operation

Resource Extraction

Operation & Maintenance

Downstream

Dismantling Decommissioning Disposal and Recycling

Combustion Technologies

Upstream

Material/Component Manufacturing Construction

Operation

Resource Extraction

Fuel Cycle

Combustion Operation & Maintenance

Downstream

Dismantling Decommissioning Disposal and Recycling

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TVA's Approach for GHG LCA in the IRP

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NREL's Method

NREL's prior systematic review of LCAs provides estimates for non-combustion GHG emissions, including non-CO_2 emissions:

Three additional life-cycle phases:

1. **Upstream** materials manufacturing and plant construction (per unit capacity)

2. **Downstream** plant decommissioning (per unit capacity)

3. **Ongoing operations and maintenance**, as well as fuel cycle emissions that are modulated by generation (per unit generation)

This process has been previously completed for nearly all technologies being considered in TVA IRP

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Systematic Review of ALL Published Electricity Generation LCAs:

First published in the IPCC Special Report on Renewables (2012), updated through DOE Vision studies, and most recently in LA100

Figure 2. Life cycle greenhouse gas emission estimates for selected electricity generation and storage technologies, and some technologies integrated with carbon capture and storage (CCS).

	Biopower	Photovoltaic	Concentrating Solar Power	Geothermal Energy	Hydropower	Ocean Energy	Wind Energy	Pumped Hydropower Storage	Lithium-Ion Battery Storage	Hydrogen Storage	Nuclear Energy	Natural Gas	Oil	Coal
Estimates	276 (+4)	46	36	35	149	10	186	16	29	1	99	80 (+13)	24	164 (+11)
References	57 (+2)	17	10	15	22	5	69	4	3	1	27	47 (+11)	10	53 (+9)

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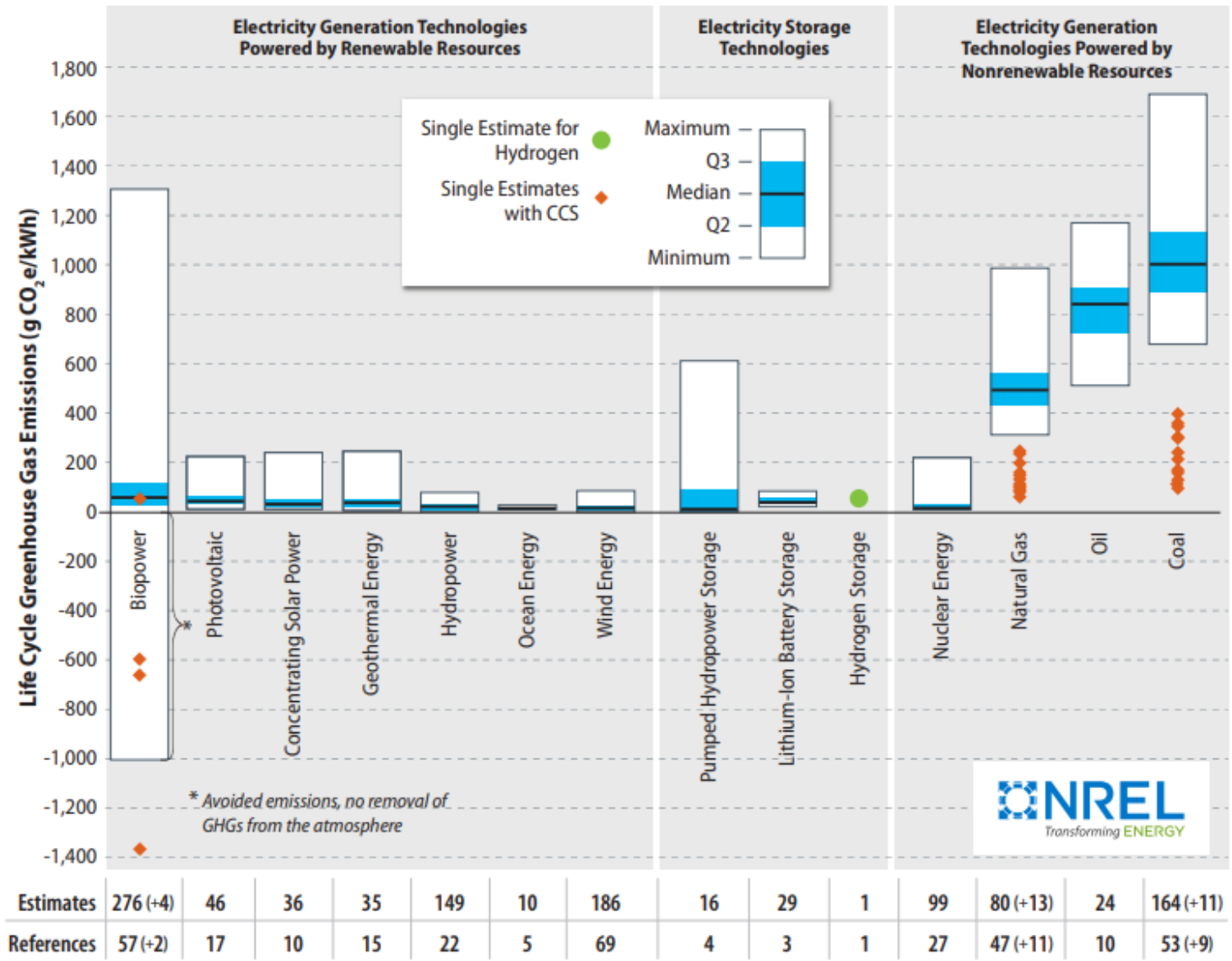
LA100: Emission Factors Example

Emission factors are utilized to estimate GHG emissions based on installed capacity, for one-time upstream and downstream emissions, or by annual generation, for ongoing non-combustion emissions.

- Ongoing combustion emissions are estimated within TVA modeling

Emission factors will be utilized by TVA's GHG LCA model to determine GHG emissions for each lifecycle phase and GHG.

Table 10. Emissions Factors for Upstream and Downstream Phases, by Technology

Technology	One-Time Upstream GHG Emission Factor (g CO_2e/ kW)	One-Time Downstream GHG Emission Factor (g CO_2e/ kW)
CAES[29]	--	N/A
Coal[30]	N/A	67,100
Concentrating Solar Power	2,970,000	239,000
Customer PV	1,630,000	37,800
Customer Storage	527,000	98,900
Fuel Cells[31]	370,000	N/A
Geothermal[32]	2,345,000	18,400
H2-Combustion Turbine[33]	64,790	2,600
NG-Combustion Turbine[34]	64,790	2,600
NG-Steam/Combined Cycle	100,000	4,070
Nuclear	N/A	175,000
Pumped Hydro Storage	800	N/A
RE-Combustion Turbine[35]	64,790	2,600
Utility Battery Storage	527,000	98,900
Utility PV	1,630,000	37,800
Utility PV + Battery[36]	1,630,000 (PV); 527,000 (Battery)	37,800 (PV) 98,900 (Battery)
Wind	619,000	14,000

Source: 2021 Chapter 8 of NREL's LA100—The Los Angeles 100% Renewable Energy Study

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TVA and NREL Planned Scope-of-Work

Garvin Heath, PhD; Principal Environmental Engineer and Distinguished Member of the Research Staff, NREL

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Results To-Date

Garvin Heath, PhD; Principal Environmental Engineer and Distinguished Member of the Research Staff, NREL

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Supplemental Slides

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NREL's Prior Life Cycle Greenhouse Gas Emissions Accounting for Power Systems

- Renewable Electricity Futures (2012)

- IPPC Special Report on Renewables (2012)

- SunShot Vision (2012) and Solar Futures (2021)

- Wind Vision (2015)

- Hydropower Vision (2019)

- Geothermal Vision (2019)

- LA100 (2021)

- And others...
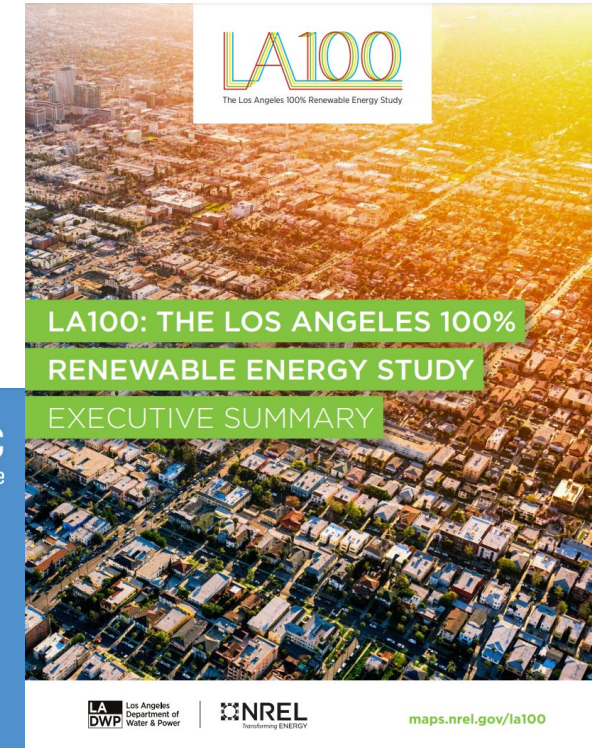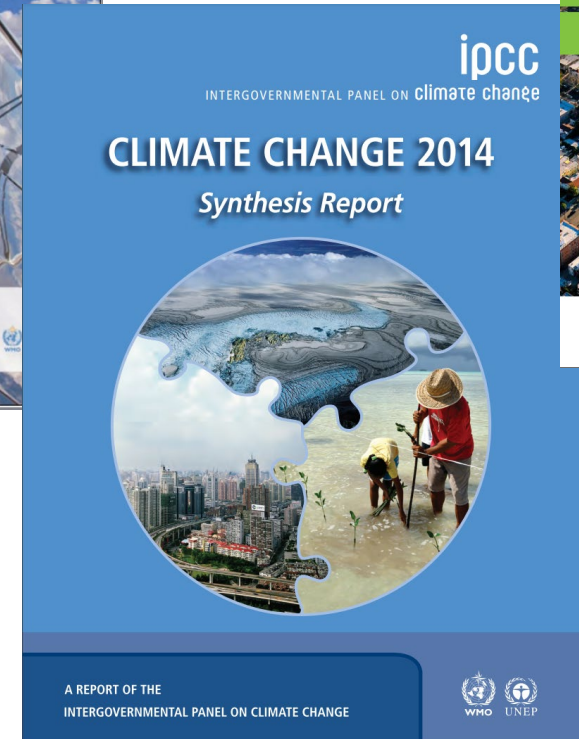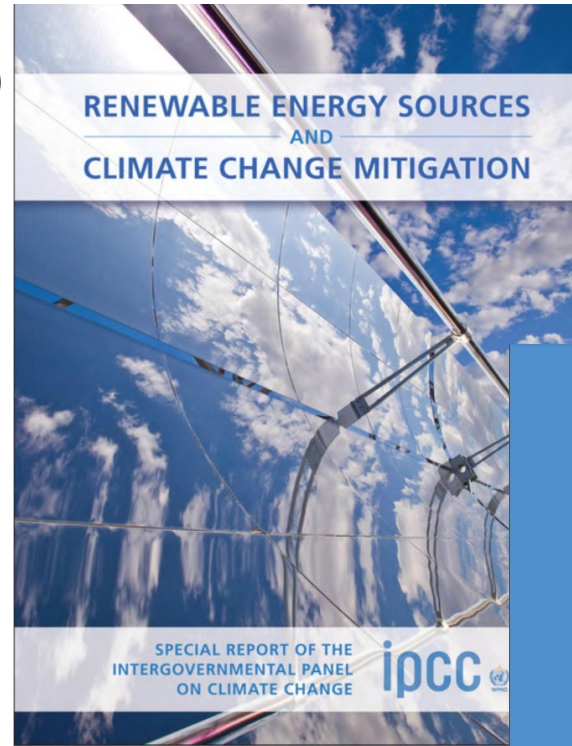
GHG Life Cycle Analysis Results in the IRP EIS

Hunter Reed; IRP Project Manager

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Break

Electric Vehicle Program Updates

Ryan Stanton; Sr. Project Manager, Enterprise Research and Technology Innovation

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TVA's history with EVs

TVA's Henney Killowatt EV (1961)
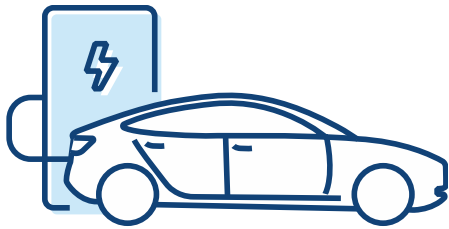

TVA's Advanced Vehicle Test Facility AVTF (1980's)

EPRI – TVA electric van conversion (1979)

Electric Transportation Research (dating back to the 1970's)

- Vehicle Evaluation and Demonstrations
- Charging Infrastructure Evaluation and Standardization
- Consumer Research

Evaluating (Technology + Consumers) as EVs moved from "R&D" to Market

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Current EV Programs: Grow a Developing Market

Charging Infrastructure Availability

- Remove "range anxiety"
- Foundational EV charging network
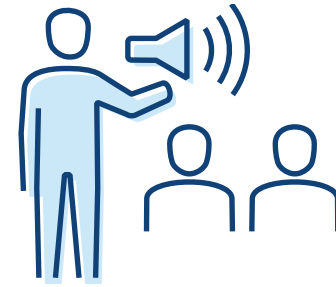- Partner with Local Power Companies (LPCs)

EV Availability and Offerings

- Partner with automakers and fleets
- Support making a wide range of EVs available

Innovative and Supportive Policies

- Remove utility policy or pricing barriers
- Craft policies and pricing that encourage investment and enable a market
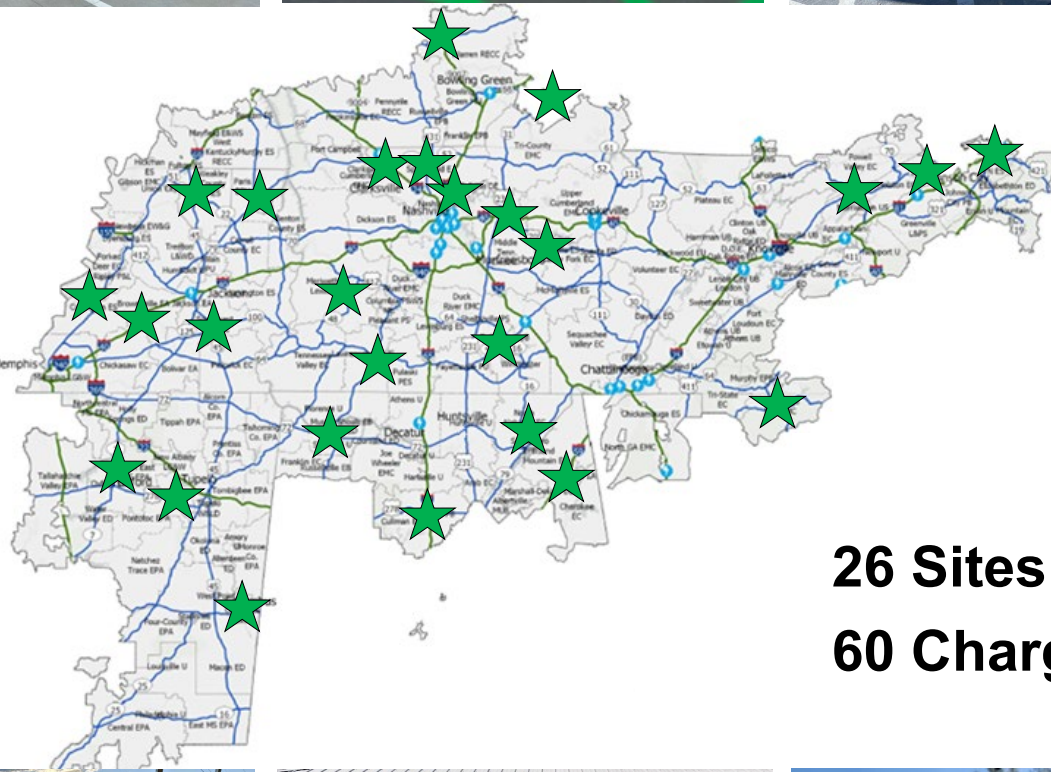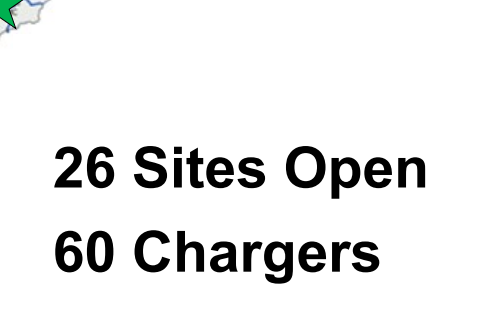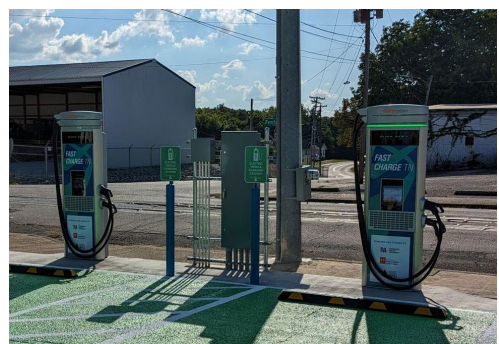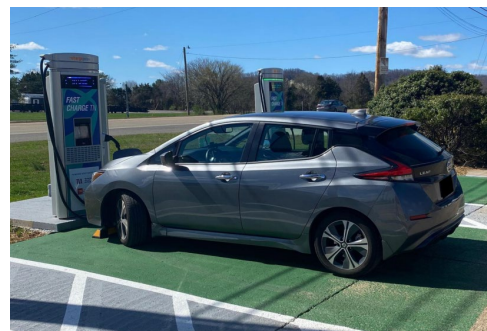
Consumer Awareness

- Help consumers make sound choices
- Educate, inform, and promote while lifting utility brands

Removing market barriers in key areas

TVA is working with stakeholders to make these initiatives available throughout the Valley

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26 Sites Open

60 Chargers

EV Evolution: Guiding Principles

What: Prepare for and enable adoption of electric vehicles in the Valley to create benefits for people, the power system, and the environment.

How: Work with stakeholders to position the Valley as a leader through innovative research, demonstrations, and partnerships.

New electric school buses at Bledsoe County Schools (Pikeville, TN)

Powerful Forces are Driving EV Adoption

Policy, technology, and compelling EV options are driving consumer adoption

Legislation, Policy, Regulation

IIJA: $17.5B for EVs
IRA: EV tax credit reform
US: 2030 goal 50% EV sales
CA: 2035 ban on ICE cars

Technology "Tipping Points"

300+ mile range
300k+ mile batt. longevity
Vehicle autonomy
V2H, V2G

Compelling Vehicles

Consumer Adoption

EVs are *accelerating* through the Tennessee Valley

In 2023	
	YOY EV population increased by almost **50%** to **52,000** electric vehicles
	EV price reductions drove **continued growth**
	TVA Fast Charge Network added 20 new locations, **removing barriers**
	New, more compelling **EV models like trucks and SUVs** hit Tennessee roads (R1S, Lightning)

New EV Sales (Registration Share)

Legend: Tesla Model Y, Tesla Model 3, Ford F-150 Lightning, Jeep Wrangler 4xe, Jeep Grand Cherokee 4xe, Ford Mustang Mach-E, Chevrolet Bolt EUV, Nissan Ariya, Kia EV6, Rivian R1S, Remaining PHEV, Remaining BEV

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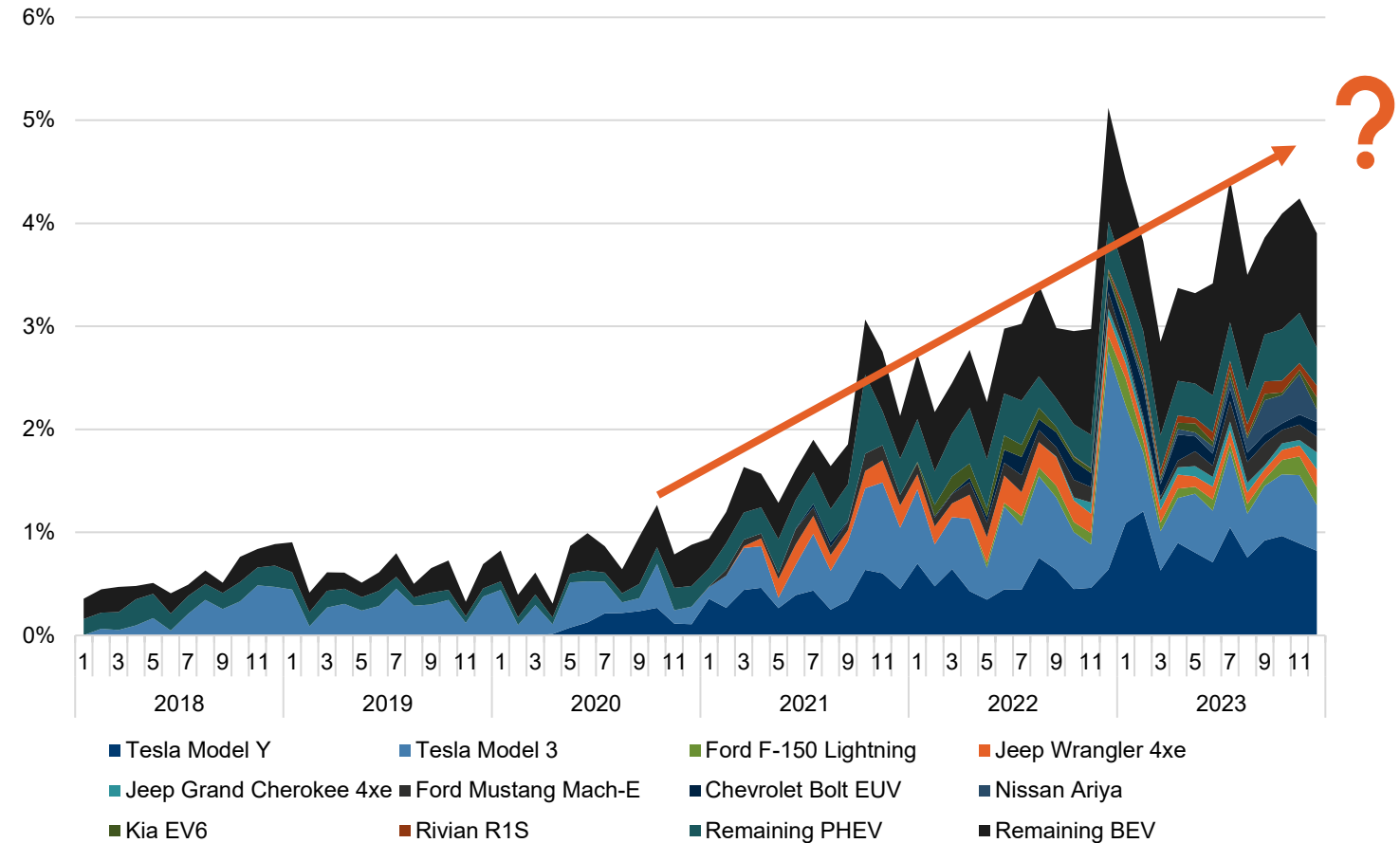
Hurricane Forecasting

- Challenge: quantify a range of possible outcomes with rapidly changing conditions

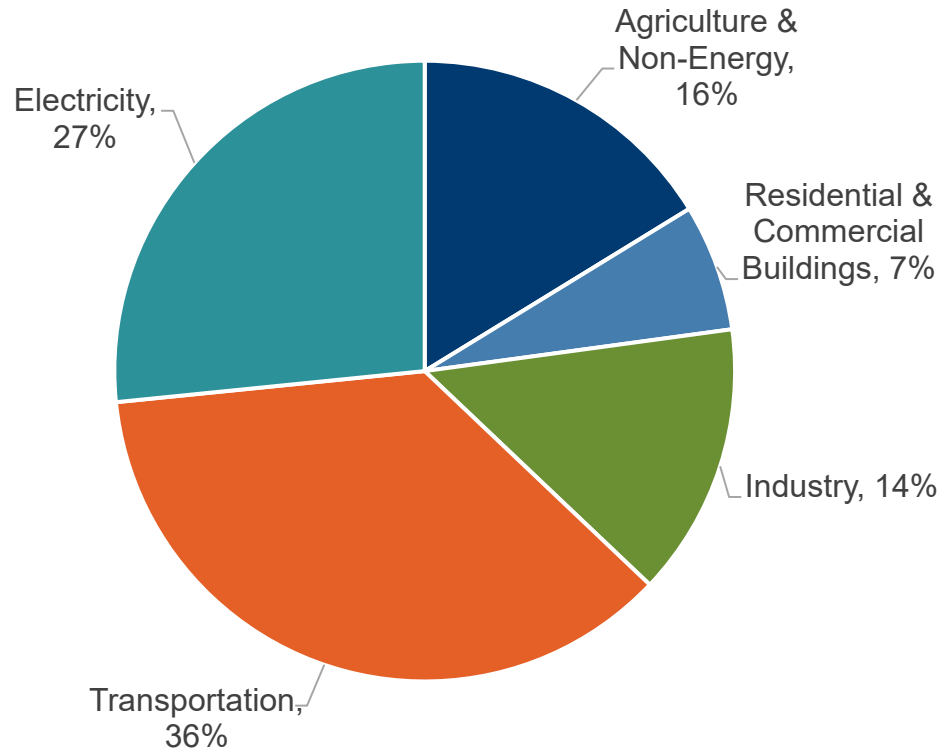- More clarity near term, less in the long term

- Multiple, disparate computer-modeled scenarios are combined to find alignment

- More alignment = more certainty

- "Hurricane hunters" continuously gather new data

Valley Pathways Study: GHG Baseline for the Valley

200 Million Metric Tonnes of CO2e

Pie chart showing:
- Agriculture & Non-Energy, 16%
- Residential & Commercial Buildings, 7%
- Industry, 14%
- Transportation, 36%
- Electricity, 27%

Tennessee Valley 2019 Greenhouse Gas Emissions (estimated). Commissioned by TVA and UTK Baker Center. Prepared by Guidehouse and VEIC. Draft, Nov. 2023.

Key Insights

- 200 MMTCO2e is ~3% of US GHG emissions – the Tennessee Valley is home to about 10 million people, or about 3% of US population.

- Transportation is, by far, the largest source of greenhouse gas emissions in the Valley.

- Emissions from Buildings and Industry look small, but these sectors demand nearly 100% of the electricity that is generated for the Valley.

- Agriculture represents only energy consumed; methane emissions related to agriculture are in Non-Energy alongside refrigerants and flame retardants.

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BAKER SCHOOL OF PUBLIC POLICY & PUBLIC AFFAIRS

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Medium & Heavy Duty Electrification

Electric fleets are coming

First movers (now):

- Last mile delivery

- Electric school buses

Coming soon:

- Semi tractors

- MW+ charging hubs

Nikola Tre Class 8 BEV tractor in Smyrna, TN

Jerry Roddy, MBA · 2nd   + Follow · · ·
Area Operations Manager II at Amazon
1w · 🌐

Our new additions to the Amazon Delivery family are getting ready to head out into Nashville from DTN8!!! Amazon has made a Climate Pledge to be Net-Zero Carbon by 2040 and in partnership with Rivian, 100,000 Rivian Delivery vans will be added to the fleet.

#amazon #rivian

You and 3,056 others   60 comments · 45 shares

Nashville: Amazon delivery vans from Rivian

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100+ electric school buses are transporting children across the Valley

ELECTRIC SCHOOL BUSES BY DISTRICT

Bledsoe County
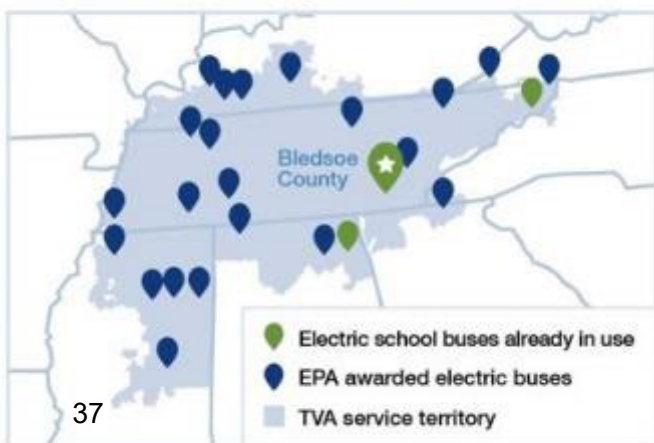
● Electric school buses already in use
● EPA awarded electric buses
▢ TVA service territory

37

TVA is supporting school districts with **technical** and **federal funding** assistance.

Understanding Fleet Types

Long Haul

Daily range: 250 – 600 miles, typically cross-country
Charging / refueling: public travel centers
Grid Impacts: Concentrated and localized (up to 45 MW))
Example fleets: large logistics companies, owner operators, semi-trucks with "sleeper cabs"
Timeline: Initial deployments expected late 2020s
Share of MHD vehicles: 9%
Share of MHD emissions: 48%

Regional / Short Haul

Daily range: 100 – 250 miles
Charging / refueling: private depot "behind the fence"
Grid Impacts: Predictable, overnight (up to 15 MW)
Example fleets: last mile delivery, middle mile, school buses, garbage trucks, semi-trucks with "day.cabs"
Timeline: Initial deployments starting in 2023
Share of MHD vehicles: 91%

Share of MHD emissions: 52%

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Freight flows in Tennessee: I-40 + I-24 are among the busiest freight corridors in the nation

Map source: FHWA State Freight Profiles (link)
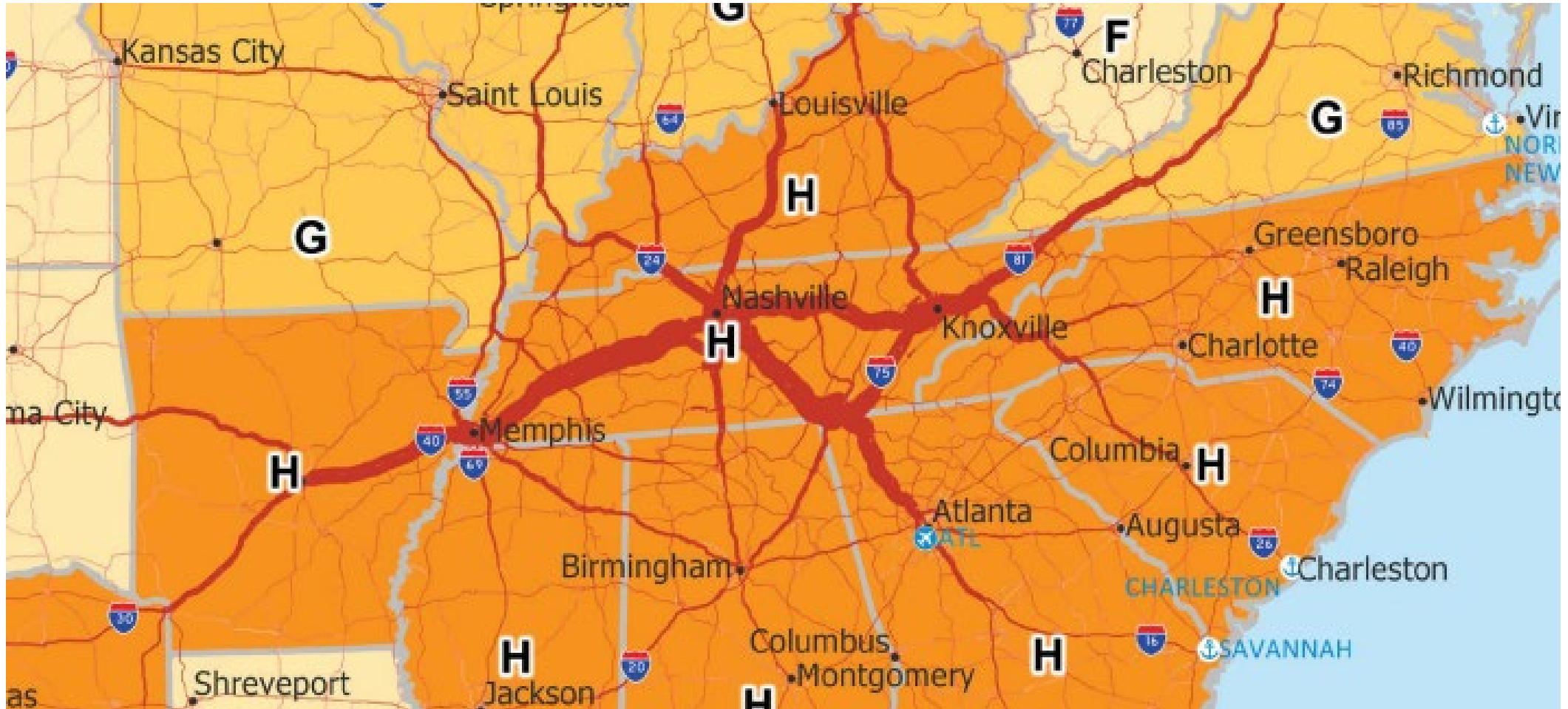
First-of-its-kind research: freight volumes

- I-24 Motion Corridor (TDOT + Vandy)

- Using camera and radar data to quantify number and types of vehicles

- Goal: understand medium and heavy duty freight volumes to asses potential for electrification
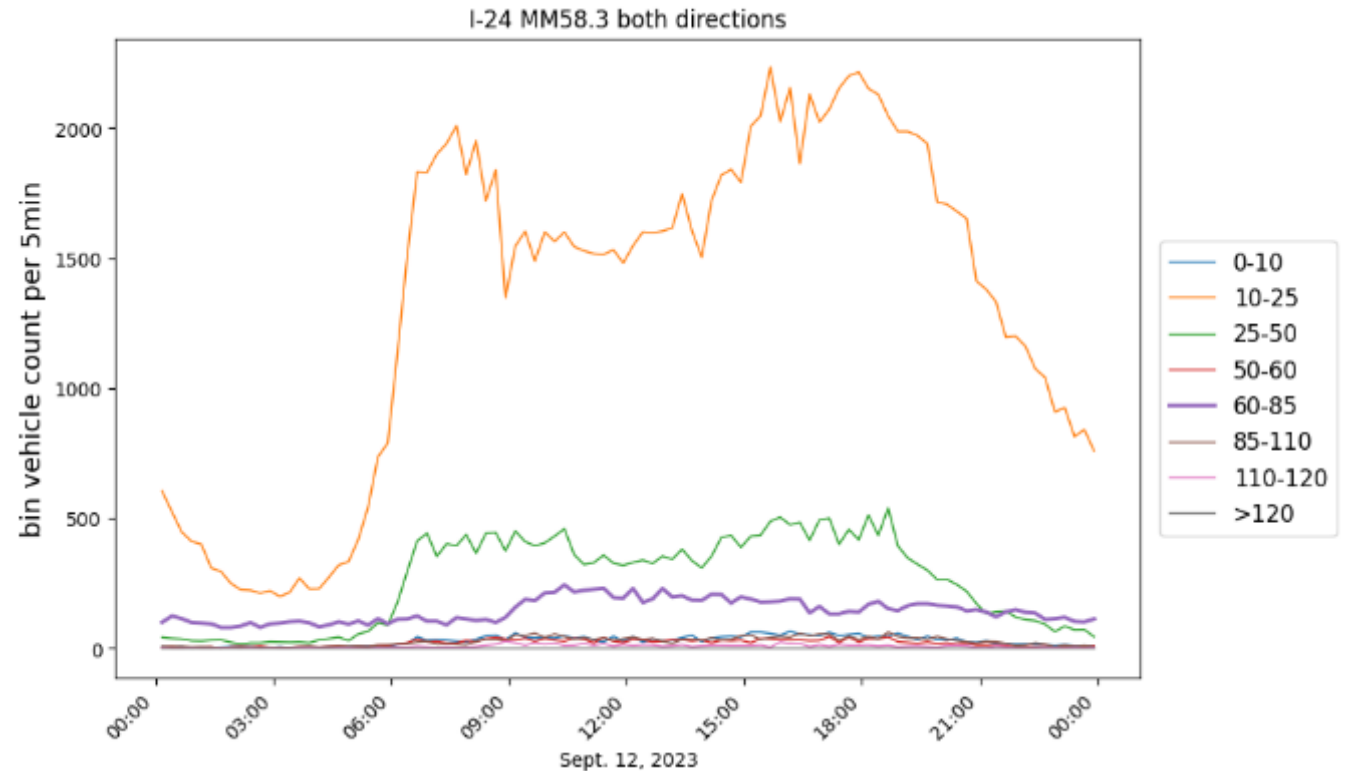
Use of roadside radar for freight analysis

Modern roadside radar units gather speed and volume of passing traffic across the entire highway.

- Data broken out by lane and by roadway direction.

- Vehicle counts broken down by length classes.
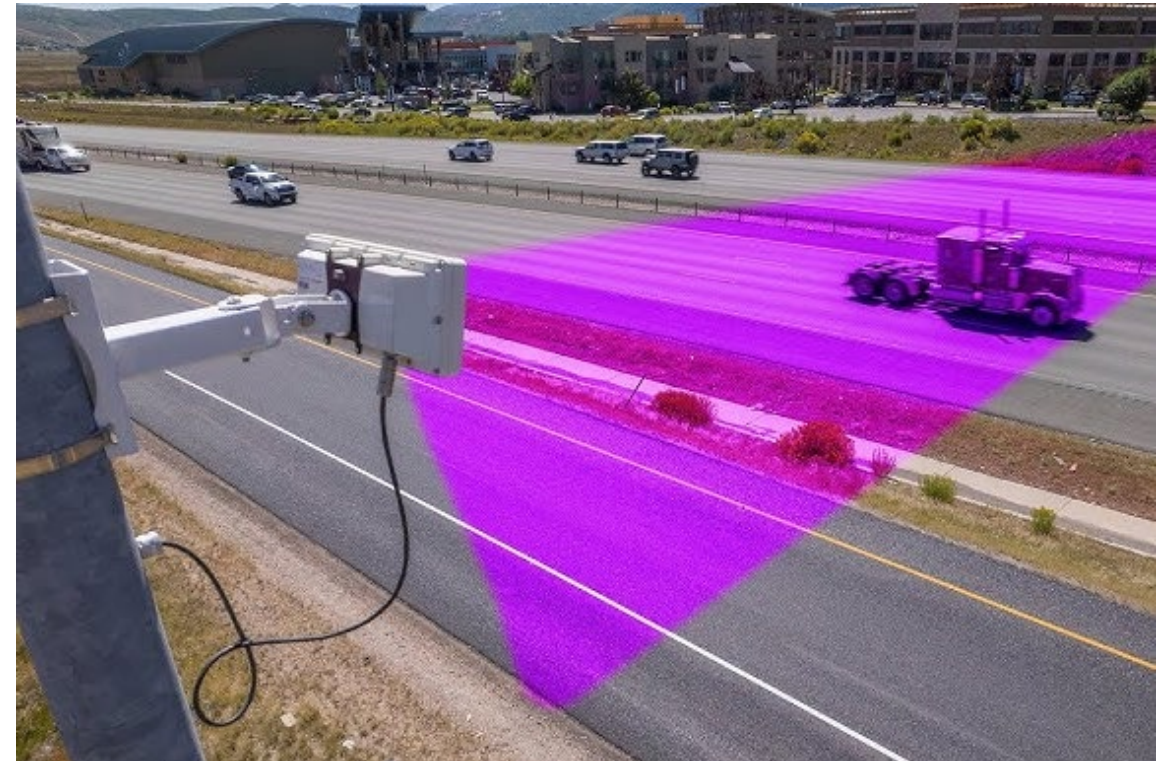
Wrap-up

Jo Anne Lavender; IRP Facilitator

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2024 IRP Working Group

Meeting 10: May 13-14, 2024
Nashville, TN

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Agenda – May 14, 2024

Topic	Time (CT)	Presenter(s)	Notes
Breakfast	8:00-9:00		
Agenda and welcome	9:00-9:15	Jo Anne Lavender	
Updates on Public Meeting and Educational materials	9:15-9:30	Amy Reagan; Amy Edge	
Federal Affairs Overview	9:30-10:30	Jessica Hogle; Bevin Taylor	
Break	10:30-10:45		
Carbon-free RFP Update	10:45-11:45	Chris Hansen	
Wrap-up	11:45-12:00		
Lunch	12:00-1:00		

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Updates on Public Meeting and Educational Materials

Amy Reagan; Sr. Manager, Operations Communications
Amy Edge; Director, Customer Relations

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TVA Federal Affairs

Jessica Hogle; Vice President, Federal Affairs
Bevin Taylor; Director, Federal Government Relations

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Agenda

Federal Affairs Overview

    o Stakeholders

    o Delegation

    o Who We Are

National Policy and Political Landscape

    o Administration Priorities

    o 118th Congressional Agenda

    o 2024 Elections

Federal Affairs Strategy

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Federal Affairs Overview

Our Stakeholders

Executive Branch

- POTUS
- White House Climate Policy Office
- Environmental Protection Agency
- Department of State
- Department of Energy
- Department of Labor
- Department of Treasury
- Department of the Interior
- Department of Homeland Security
- Securities & Exchange Commission
- Internal Revenue Service
- U.S. Government Accountability Office
- U.S. General Services Administration
- U.S. Office of Personnel Management
- Federal Energy Regulatory Commission
- Nuclear Regulatory Commission
- Appalachian Regional Commission

Legislative Branch

- U.S. Senators
- U.S. Congressional Representatives
- Congressional Committees of Jurisdiction:
  - Senate Environment & Public Works
  - House Transportation & Infrastructure

National Trade Associations

- American Public Power Association
- National Rural Electric Coop Association
- Edison Electric Institute
- Electric Power Research Institute
- Nuclear Energy Institute

Partners & Coalitions

- Alliance to Save Energy
- Atlantic Council
- ClearPath
- Keystone Policy Center
- Global Women's Innovation Network
- National Energy Resources Organization
- Women's Energy Resources Council D.C.
- American Nuclear Society
- Labor Unions

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TVA Territory Congressional Districts

NORTH REGION

4th - Scott DesJarlais (R-TN)
5th - Andy Ogles (R-TN)
6th - John Rose (R-TN)
7th - Mark Green (R-TN)
1st - James Comer (R-KY)
2nd - Brett Guthrie (R-KY)
5th - Harold "Hal" Rogers (R-KY)

WEST REGION

7th - Mark Green (R-TN)
8th - David Kustoff (R-TN)
9th - Steve Cohen (D-TN)
1st - Trent Kelly (R-MS)
2nd - Bennie Thompson (D-MS)
3rd - Michael Guest (R-MS)
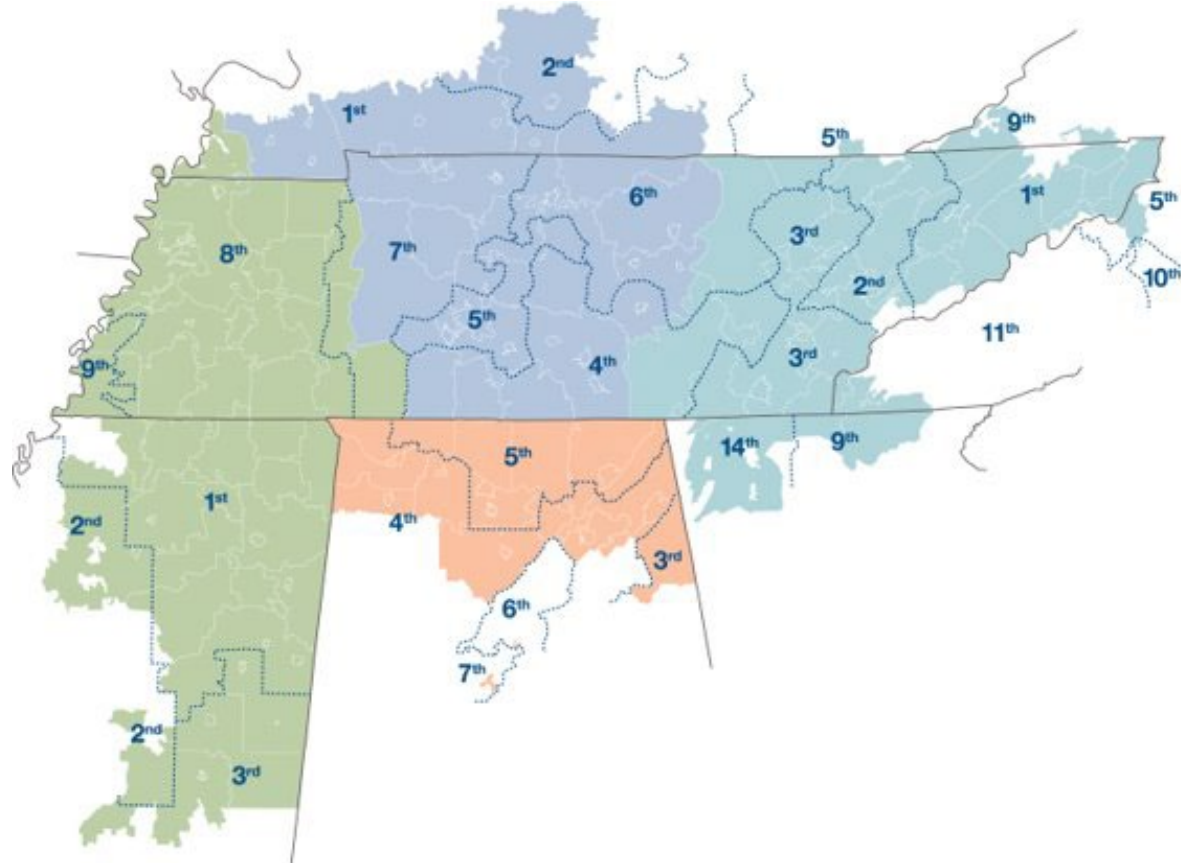
EAST REGION

1st - Diana Harshbarger (R-TN)
2nd - Tim Burchett (R-TN)
3rd - Chuck Fleischmann (R-TN)
4th - Scott DesJarlais (R-TN)
6th - John Rose (R-TN)
9th - Andrew Clyde (R-GA)
14th - Marjorie Taylor Greene (R-GA)
5th - Virginia Foxx (R-NC)
10th - Patrick McHenry (R-NC)
11th - Chuck Edwards (R-NC)
9th - Morgan Griffith (R-VA)

SOUTH REGION

3rd - Michael "Mike" Rogers (R-AL)
4th - Robert Aderholt (R-AL)
5th - Dale Strong (R-AL)
6th - Gary Palmer (R-AL)
7th - Terri Sewell (D-AL)

U.S. SENATORS

Sen. Bill Hagerty (R-TN)
Sen. Marsha Blackburn (R-TN)
Sen. Cindy Hyde-Smith (R-MS)
Sen. Roger Wicker (R-MS)

Sen. Mitch McConnell (R-KY)
Sen. Rand Paul (R-KY)
Sen. Raphael Warnock (D-GA)
Sen. Jon Ossoff (D-GA)

Sen. Thom Tillis (R-NC)
Sen. Ted Budd (R-NC)
Sen. Mark Warner (D-VA)
Sen. Tim Kaine (D-VA)

Sen. Tommy Tuberville (R-AL)
Sen. Katie Britt (R-AL)

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Who We Are

Washington Representatives

Jessica Hogle
Vice President
- ELT/Leadership Team Engagement
- Asset & Decarbonization Strategy

Bevin Taylor
Director
- Board Nominations
- Office of Management and Budget
- Policy Coordination

Natalie Cook
Sr. Strategic Consultant
- Environmental Justice
- Cultural Resources
- Labor

Alice Fothergill
Executive Assistant
- Executive Scheduling
- Correspondence
- Administrative Assistance

Ameera Bhatti
Associate Washington Representative
- Legislation & Hearing Monitoring
- Project & Research Support

Sarah Eason
Senior Representative
North region
- Innovation
- Broadband
- Decarbonization Tech
- Energy Efficiency
- IIJA/IRA Funding

Alexa Ingram
East region
- Nuclear
- Natural Resources

Chloe Cantor
West and Southwest regions
- River management
- Fossil operations
- Clean Air Regulations
- Emergency Preparedness
- Water Resources
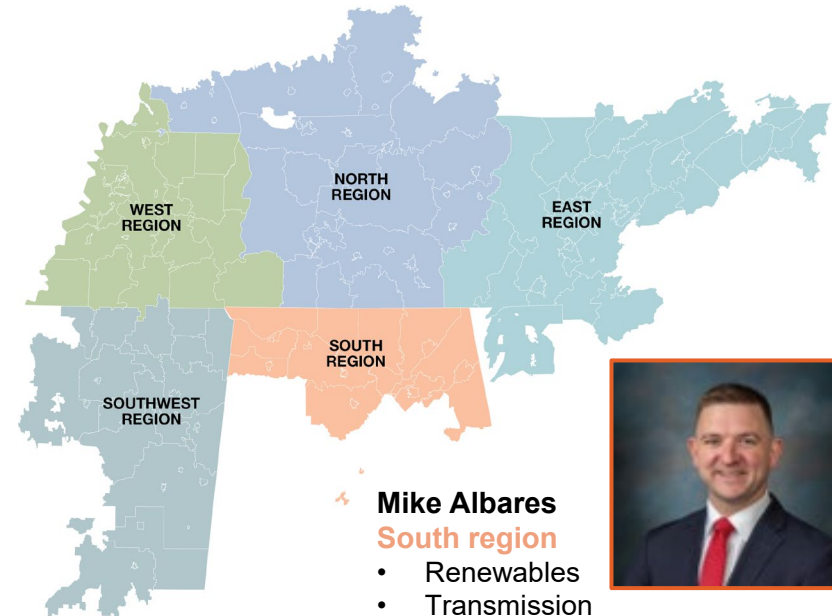
Mike Albares
South region
- Renewables
- Transmission
- Grid Security and Oversight
- Supply Chain

WEST REGION
NORTH REGION
EAST REGION
SOUTHWEST REGION
SOUTH REGION

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National Policy and Political Landscape

Administration Clean Energy Goals

In rejoining the Paris Agreement, the Biden Administration pledged to reduce GHG emissions in the US by at least 50% below 2005 levels by 2030. Embedded in that pledge is target to create a carbon free power sector by 2035.

Biden Energy Plan

100% Carbon pollution free electricity by 2035 — **2035**

100% zero emissions for all new vehicles — **2035**

Net-zero emissions building portfolio — **2045**

Net-zero emissions from federal procurement — **2050**
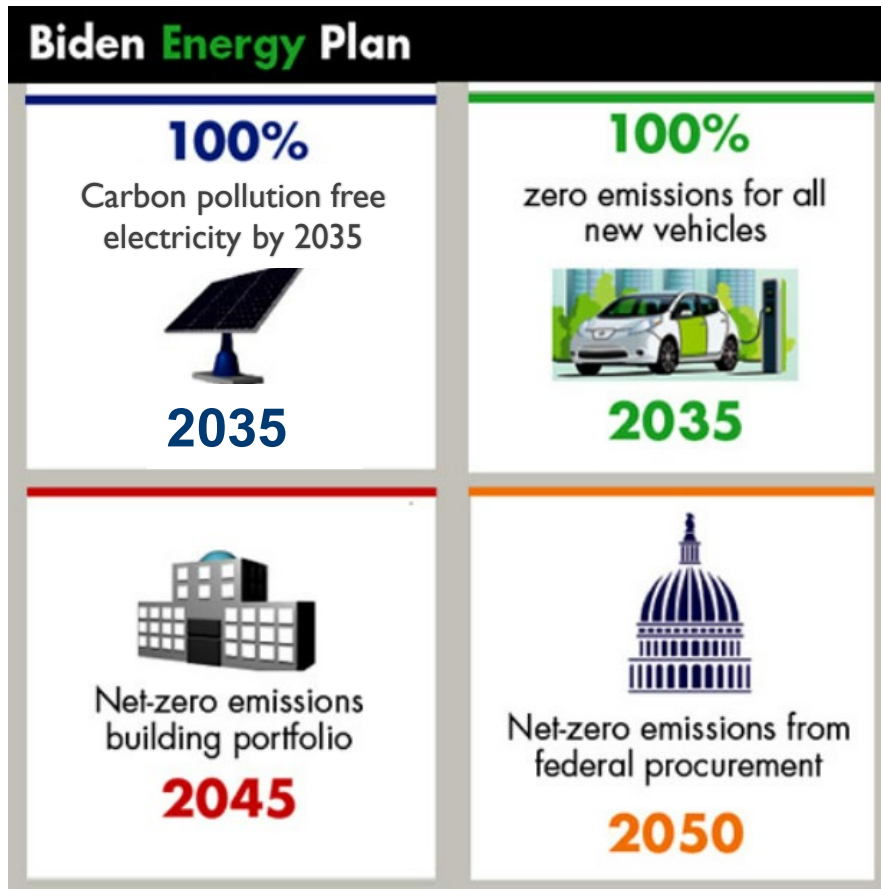
Policy Tools:

- Legislation – Infrastructure Investment & Jobs Act (IIJA) and Inflation Reduction Act (IRA)

- Regulation – EPA Rules and DOE Efficiency Standards

- Executive Orders – Federal Sustainability

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The 118th Congress

SENATE

Democrats **51**

Republicans **49**
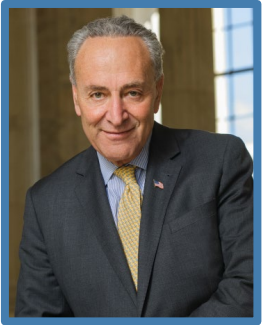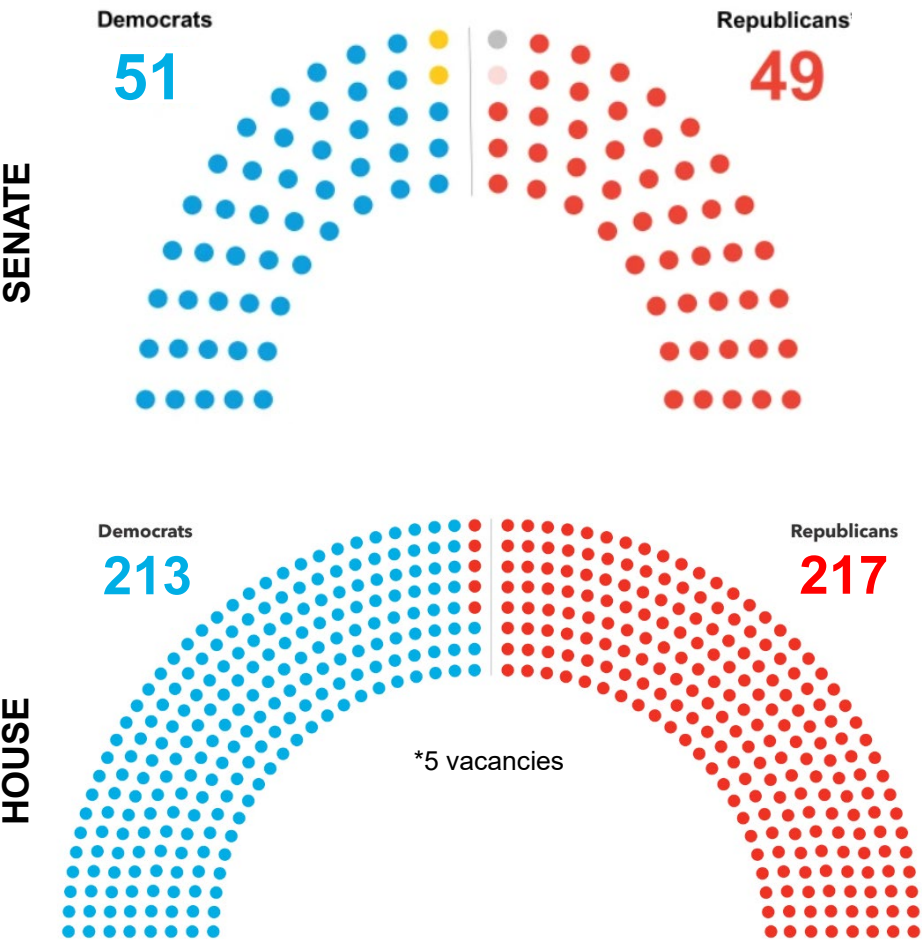
Senate Majority
Leader Chuck
Schumer (D-NY)

Senate Minority
Leader Mitch
McConnell (R-KY)

HOUSE

Democrats **213**

Republicans **217**

*5 vacancies

Speaker
Mike Johnson
(R-LA-04)

Majority Leader
Steve Scalise
(R-LA-01)

Minority Leader
Hakeem Jeffries
(D-NY-08)

Minority Whip
Katherine Clark
(D-MA-05)

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118th Congress Policy Priorities and Focus Areas

- **Government Funding and Budget**

- **National Security and Defense**

- **Climate Change Mitigation and Adaptation**

  - EPA Clean Air and Water Regulations and Oversight

  - IIJA and IRA Oversight and Implementation

- **Permitting Reform**

- **Onshoring Domestic Manufacturing/Supply Chain Constraints**

- **Nominations**

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Presidential Elections – 528 Politics

Biden Job Approval
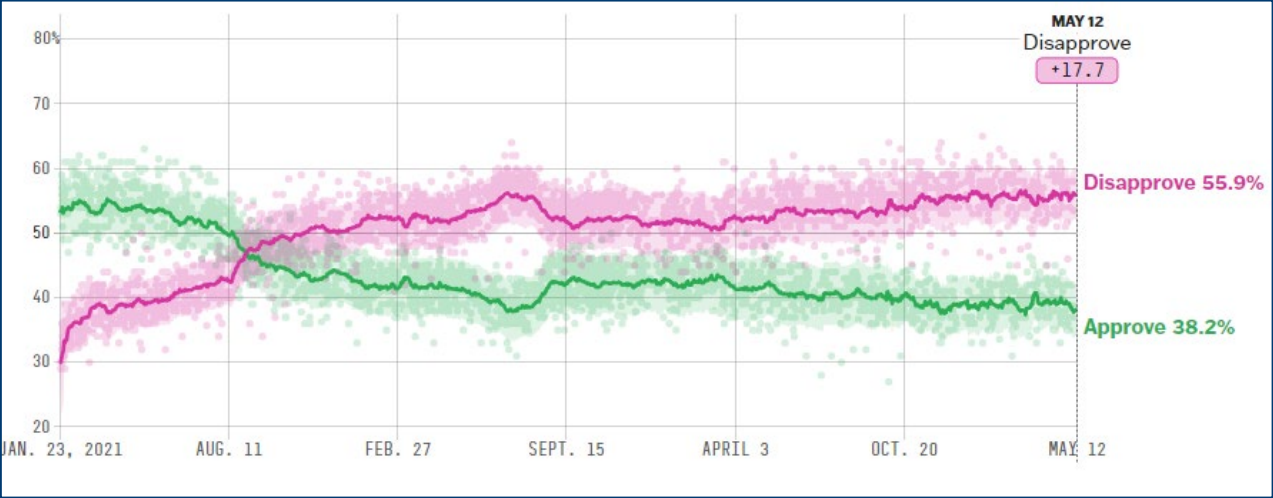
Trump Favorability
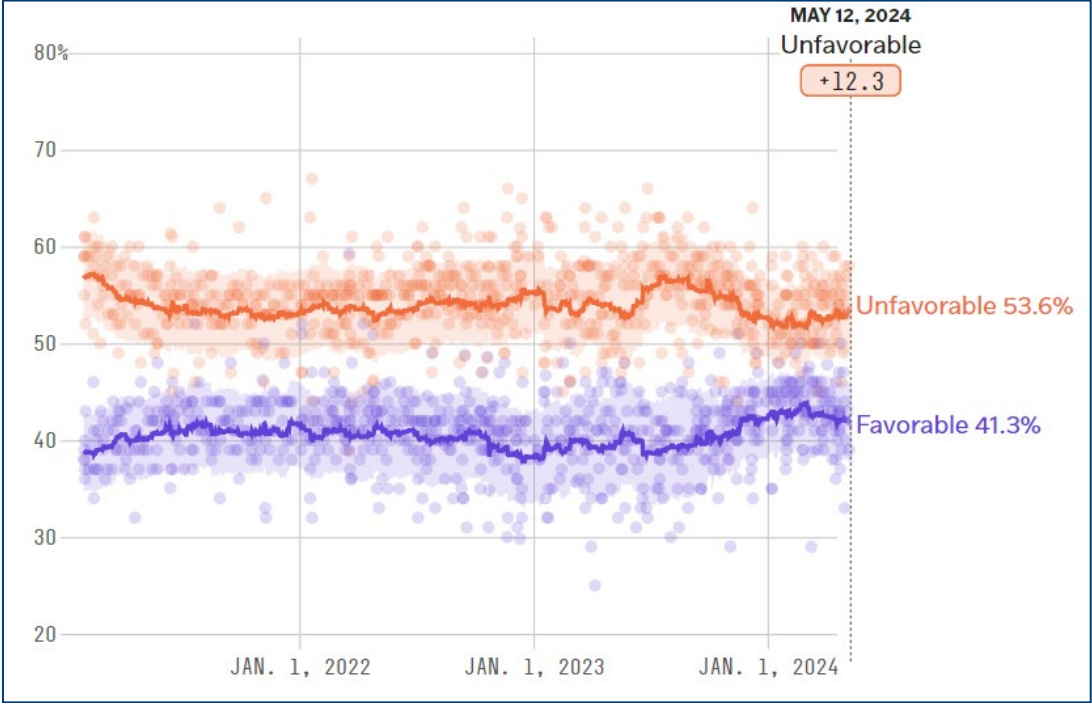
Battleground states are Arizona, Georgia, Pennsylvania, Michigan, Nevada, and Wisconsin.

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Congressional Elections

Presidential battleground states also have highly competitive congressional seats up for re-election.

SOLID DEMOCRAT   218   SOLID REPUBLICAN

| 171 | 18 | 14 | 22 | 8 | 10 | 192 |
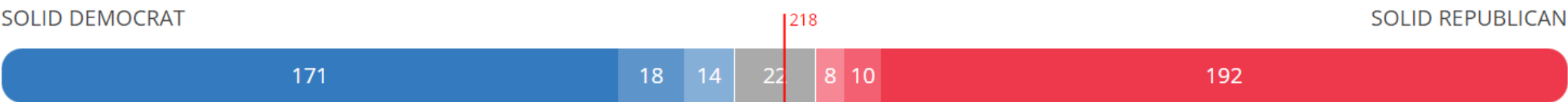
Although there are more competitive House races held by Democrats (24) than Republicans (20), GOP-held toss-up races are all in states that voted for Biden (8 are in CA and NY), and 8 are Freshman.

SENATE SEATS   Includes seats not up for re-election. Control of Senate marked at 50 seats.

DEMOCRAT   50   REPUBLICAN

| 28 | 23 | 11 | 38 |
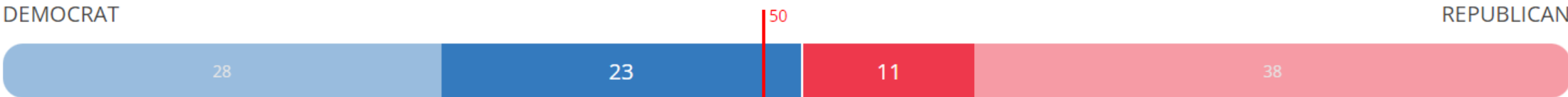
There are 23 Senate seats held by Democrats up for re-election this cycle, compared to 11 Republican seats.

■ **Solid:** These races are not considered competitive and are not likely to become closely contested.

■ **Likely:** These races are not considered competitive at this point but have the potential to become engaged.

■ **Lean:** These races are considered competitive races, but one party has an advantage.

■ **Toss Up:** These races are the most competitive; either party has a good chance of winning.

Source: Cook Political Report.

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Partisan Gaps on Policy Priorities

According to a Pew Research Center survey conducted January 16-21 of US adults on what should be a top priority for POTUS and Congress to address:

- For Democrats, health care costs, the economy, education and the environment are more important. For Republicans, the economy, terrorism, and immigration are highest.

- Widest partisan gaps remain are on whether the environment and climate change should be top priorities.

	Dem/ Lean Dem	Rep/ Lean Rep	Rep-Dem diff.
Strengthening economy	68	84	16
Reducing health care costs	48	71	-23
Defending against terrorism	55	65	10
Reducing influence of money in politics	55	63	-8
Making Medicare financially sound	48	68	-20
Reducing the budget deficit	44	71	27
Reducing crime	47	65	18
Improving education	51	62	-11
Reducing availability of illegal drugs	46	61	15
Dealing with immigration	37	70	33
Improving energy system	48	57	-9
Improving job situation	46	53	-7
Dealing with problems of poor people	30	61	-31
Protecting the environment	20	67	-47
Improving transportation	33	51	-18
Strengthening military	24	56	32
Dealing with global climate change	13	59	-46
Dealing with global trade	34	35	-1
Addressing issues around race	13	49	-36
Dealing with challenges facing parents	24	29	-5
Dealing with coronavirus outbreak	12	38	-26

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Clean Energy Voter Perceptions

If the U.S. greatly reduces energy production from fossil fuel sources and increases production from renewable sources, % of U.S. adults who say it would ___ each of the following in their local area

■ Make better   ▪ Not have much of an effect   ■ Make worse

	Make better	Not have much of an effect	Make worse
Air and water quality	59	30	11
Job opportunities in the energy sector	49	25	25
Prices you pay to heat and cool your home	37	20	42
Frequency of extreme weather events	33	53	13
Reliability of the electrical grid	32	29	38
Prices you pay for everyday goods	25	29	44

% of U.S. adults who favor more ...

Solar power
Dem/lean Dem: 92, 94, 94, 93
Rep/lean Rep: 87, 84, 77, 70

Wind power
87, 90, 92, 91
80, 75, 64, 60

Nuclear power
51, 53, 66, 67
38, 37, 48, 50

'16   '20   '23

% of U.S. adults who say they **favor** the following proposals to reduce the effects of climate change

Planting about a trillion trees to absorb carbon emissions	89
Requiring oil and gas companies to seal methane gas leaks from oil wells	85
Providing a tax credit to businesses for developing carbon capture/storage	76
Taxing corporations based on their carbon emissions	70
Requiring power plants to eliminate all carbon emissions by 2040	61
Requiring most new buildings to be run on electricity with no gas lines	46

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Federal Affairs Strategy

Federal Affairs Strategy

Deliver Outcomes and Mitigate Risk

Enhance our public policy brand and reputation

Policy Engagement

Proactively educate policymakers on relevant issues

Strong Stakeholder Relationships

Cultivate champions for TVA and the public power model

Position TVA as a thought leader and solutions provider.

Support decarbonization affordably and reliably.

Maximize investment opportunities in the Valley.

Enable board governance continuity.

Our strategy is designed to enable outcomes consistent with TVA's strategic intent and priorities.

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Policy Engagement

Energy
Deliver affordable, reliable, resilient and sustainable (decarbonized) electricity.

- IIJA and IRA Oversight and Implementation
- EPA Clean Air, Water Regulations and Oversight
- Cybersecurity

Environment
Steward and Conserve our Resources

- Permitting Reform
- Biodiversity and Nature-Based Decarbonization Solutions
- Adaptation and Resilience

Economic Development
Deliver the Clean Energy Economy of the Future

- Onshoring Domestic Manufacturing
- Workforce Development
- Economic Policy/Addressing Inflation

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Strategic Elements Driving Desired Outcomes

WASHINGTON REPRESENTATIVES
DC presence to build and maintain strong relationships

EXECUTIVES
Senior leadership participates in policy discussions

PARTNERSHIPS
Effective participation in partnerships

LOCAL STAKEHOLDER ENGAGEMENT
Support from individual stakeholders

COMMUNICATIONS
Media, events, and/or other channels inform policy views

STRATEGIES OF AN EFFECTIVE ORGANIZATION

FRAMING
Messages tailored and framed in a helpful way

RESEARCH & DATA
Accurate, credible research in clear and concise formats

CONSENSUS
Reasonable trade-offs to achieve solutions

CSR
Meaningful investments in social responsibility

ETHICS
Ethical practices and corporate accountability

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Q&A

Break

Carbon-free RFP Update

Chris Hansen, Vice President, Origination and Renewables

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Wrap-up and Lunch

Jo Anne Lavender; IRP Facilitator

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