2024 U.S. Emissions and Energy System Baselines

Projections from the 2024 Biennial Transparency Report

January 2025

Background | The 2024 Biennial Transparency Report

The 2024 Biennial Transparency Report (BTR), published in December 2024, provides official U.S. government projections of greenhouse gas (GHG) emissions through 2040.

This report focuses on the *With Measures* projections in the BTR, which incorporate the impacts of current policies as of May 2024. The full range of projections is called the **2024 Policy Baseline**. These projections are quantitative scenarios that rely on a suite of models implemented across U.S. government agencies.

Background | This Report

This report provides a more detailed summary of the energy system and emissions modeling results informing the BTR. It is divided into four sections:

1. **GHG Emissions Projections:** An overview of the net greenhouse gas (GHG) emissions projections presented in the BTR.
2. **Energy System Baselines:** A sector-by-sector overview of the shifts in the U.S. energy system based on policies enacted through May 2024. This section also includes results on energy-related CO_2 emissions.
3. **Non-CO_2 Emissions Projections:** An overview of the non-CO_2 modeling results informing the BTR.
4. **Land Use, Land Use Change, and Forestry:** An overview of the land use, land use change, and forestry (LULUCF) modeling informing the results presented in the BTR.

Background | Energy System Models

GCAM

The Global Change Analysis Model (GCAM) is an open-source model developed and maintained by the Joint Global Change Research Institute - a collaboration between the Pacific Northwest National Laboratory and the University of Maryland. This modeling exercise uses GCAM version 7, modeling the US as a single energy and economic region. GCAM runs through 2100 at 5-year timesteps. As a dynamic-recursive equilibrium model, GCAM solves for equilibrium prices and quantities in hundreds of markets, with solutions depending only on the conditions in the current and sometimes, previous model periods.

For more information, see the following: GCAM v7 Documentation

OP-NEMS

OP-NEMS is a version of the National Energy Modeling System (NEMS) developed by the DOE Office of Policy (OP). NEMS is the primary model used for economy-wide energy system modeling for the U.S. government and is used to develop key analyses including the U.S. Energy Information Administration (EIA) Annual Energy Outlook.

For more information see the following: DOE Office of Policy National Energy Modeling System (OP-NEMS)

USREP-ReEDS

USREP-ReEDS is a computable general equilibrium (CGE) model combining the U.S. Regional Energy Policy model (USREP), a 12-region, 14-sector CGE model of the U.S. economy developed at the MIT Joint Program on the Science and Policy of Global Change, and the Regional Energy Deployment System (ReEDS), a bottom-up US electricity capacity expansion model developed by NREL.

For more information see the following: ReEDS-USREP Model Collaboration | MIT Global Change

Background | Non-CO_2 Models

The BTR includes projections of emissions of methane (CH_4), hydrofluorocarbons (HFCs), nitrous oxide (N_2O), nitrogen trifluoride (NF_3), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6) based on EPA and USDA modeling.

EPA

- Non-CO_2 GHG projections for Energy, Industrial Processes and Product Use (IPPU), and Waste are based on updated data and methodology consistent with *Non-CO_2 Greenhouse Gas Emission Projections & Mitigation Potential: 2015-2050* (EPA, 2019).
- Non-CO_2 projections for Transportation are based on the regulatory impact analysis for the Multi-Pollutant Emissions Standards for Model Years 2027 and Later Light-Duty and Medium-Duty Vehicles (EPA, 2024).

USDA

- Agricultural non-CO_2 and LULUF emissions from croplands is based on USDA modeling and assumptions.

Background | LULUCF Models

Global Timber Model (GTM)

GTM is a dynamic intertemporal economic model that determines timber harvests, timber investments and land use optimally over time under assumed future market, policy, and environmental conditions. The model generates projections using detailed biophysical and economic forestry data for different countries/regions, including the U.S.

For more information, see the following: GTM Model Documentation

Forest and Agriculture Sector Optimization Model with Greenhouse Gases (FASOMGHG)

FASOMGHG is a dynamic partial equilibrium optimization model of the U.S. forestry and agriculture sectors. FASOMGHG includes detailed representations of agricultural and forest product markets, contemporary forest inventories, intersectoral resource competition and land use change costs, and costs of mitigation strategies.

For more information see the following: FASOMGHG Documentation

U.S. Forest Service (USFS) Resources Planning Act (RPA) Modeling System

This modeling system includes the Forest Dynamics model, Land Use Change model, and Global Trade Model (FOROM). The Forest Dynamics Model, the Land Use Change Model, and FOROM are harmonized based on timber prices and inventory growth rates, and driven by shifts in population, income, and radiative forcing. The land use change projections account for differential land rents among land uses. The Forest Dynamics Model projects forest ecosystem carbon and other land converted to forest carbon. The FOROM model projects harvested wood products carbon.

For more information see the following: FOROM Technical Documentation (2021); Forest Dynamics Model Documentation; Land Use Change Model Documentation

Background | Policy Assumptions

The 2024 Policy Baseline represents policies enacted as of May 2024, including:

- The Bipartisan Infrastructure Law (BIL)
- The Inflation Reduction Act (IRA)
- EPA New Source Performance Standard and Emission Guidelines for the Oil and Gas Sector
- EPA Greenhouse Gas Standards for Light- and Medium-Duty Vehicles
- EPA Greenhouse Gas Standards for Heavy-Duty Vehicles
- EPA Greenhouse Gas Standards for Fossil Fuel Fired Power Plants
- DOE energy efficiency standards for residential appliances including but not limited to, natural gas furnaces, electric and natural gas water heaters, and refrigerators

Further detail on policy implementation across models can be found in BTR Model Documentation.

Background | Scenarios

This report includes 11 technology and policy scenarios across three energy system models. For each of these scenarios, three LULUCF scenarios are run to reflect a range in sequestration. The 2024 Policy Baseline is comprised of 33 distinct scenarios.

Technology/Policy Scenario	Description	GCAM	OP-NEMS	USREP-ReEDS
Reference	Technology costs from the 2023 Annual Technology Baseline (ATB).	✓	✓	✓
High Fuel Cost	50% lower oil and gas resource recovery and 50% higher drilling costs relative to the Reference case.	✓	✓	
Low Fuel Cost	50% higher oil and gas resource recovery and 50% lower drilling costs relative to the Reference case.	✓	✓	✓
Advanced Technology	Advanced technology costs from the 2023 ATB, higher bonus credits for clean electricity tax credits and commercial renewable energy credit, higher credit value assumed for IRA clean vehicle credit, higher levels of hydrogen demand based on the U.S. National Clean Hydrogen Strategy and Roadmap.		✓	
High Fuel Cost and Low Renewable Energy Cost	50% lower oil and gas resource recovery and 50% higher drilling costs relative to the Reference case. Low technology costs from the 2023 ATB.	✓		✓

Note: Unless otherwise specified, scenarios assume Moderate technology costs from the 2023 Annual Technology Baseline for electricity generating technologies.

Background | Modeled Provisions in the IRA

Section	Tax code	Program	GCAM	OP-NEMS	USREP-ReEDS
Multi-Sector					
13104	45Q	Credit for carbon oxide sequestration (CCS & DAC)	Y	Y	Y
13204	45V	Clean hydrogen production tax credit (PTC)	Y	Y	N
22001	-	Electric loans for renewable energy	N	Y	Y
50141	-	Funding for DOE Loan Programs Office	N	Y	Y
50144	-	Energy infrastructure reinvestment financing	Y	Y	Y
50145	-	Tribal energy loan guarantee program	N	Y	Y
Electricity					
13101	45	PTC for electricity from renewables	Y	Y	Y
13102	48	Investment tax credit (ITC) for energy property	Y	Y	Y
13103	48(e), 48E(h)	Low-income communities ITC bonus credit	N	N	Y
13105	45U	Zero-emission nuclear power PTC	Y	Y	Y
13701	45Y	New clean electricity PTC	Y	Y	Y
13702	48E	New clean electricity ITC	Y	Y	Y
13703	168(e)(3)(B)	Cost recovery for qualified property (13703)	N	Y	Y
22004	-	USDA assistance for rural electric cooperatives	N	Y	N
50151	-	Transmission facility financing	N	N	N
Transportation					
13201	40A, 6426(c), 6427(c)	Biodiesel and renewable fuels PTC	Y	Y	N
13202	40	Second-generation biofuels PTC	Y	Y	N
13203	40B	Sustainable aviation fuel PTC	Y	N	N
13401	30D	Clean vehicle credit	Y	Y	Y
13402	25E	Credit for previously-owned clean vehicles	N	N	N
13403	45W	Qualified commercial clean vehicle credit	Y	Y	Y
13404	30C	Alternative fuel vehicle refueling property credit	Y	N	N
13704	45Z	Clean fuel PTC	Y	Y	N
60101	-	Clean heavy-duty vehicles	N	Y	Y
70002	-	U.S. Postal Service clean fleets	N	Y	Y

Section	Tax code	Program	GCAM	OP-NEMS	USREP-ReEDS
Buildings					
13301	25C	Energy efficient home improvement tax credit	Y	Y	Y
13302	25D	Residential clean energy tax credit	Y	Y	Y
13303	179D	Energy efficient commercial buildings deduction	Y	Y	Y
13304	45L	New energy efficient home credit	Y	Y	Y
30002	-	Green and resilient (HUD) retrofit program	N	N	Y
50121	-	Home energy performance-based whole-house rebates	Y	Y	Y
50122	-	High-efficiency electric home rebate program	Y	Y	Y
60502	-	Assistance for federal buildings	N	N	Y
Industry					
13501	48C	Advanced energy project credit	N	Y	Y
13502	45X	Advanced manufacturing production credit	N	N	Y
50161	-	Advanced industrial facilities deployment program	N	Y	Y
60113	-	Methane emissions reduction program	N	na[1]	N
Multiple	-	Vehicle manufacturing loans/grants	N	Y	N
Multiple	-	Low-carbon materials	N	Y	N
Multiple	-	Agriculture and forestry provisions	Y	Y	N
Multiple	-	Oil and gas lease sales	N	Y	N
Cross-Cutting Funds and Grants					
60103	-	Greenhouse gas reduction fund	N	Y	Y
60114	-	Climate pollution reduction grants	N	Y	Y
60201	-	Environmental and climate justice block grants	N	Y	Y

[1]NEMS does not cover non-CO2 emissions

2024 U.S. Greenhouse Gas Emissions

Projections from the 2024 Biennial Transparency Report

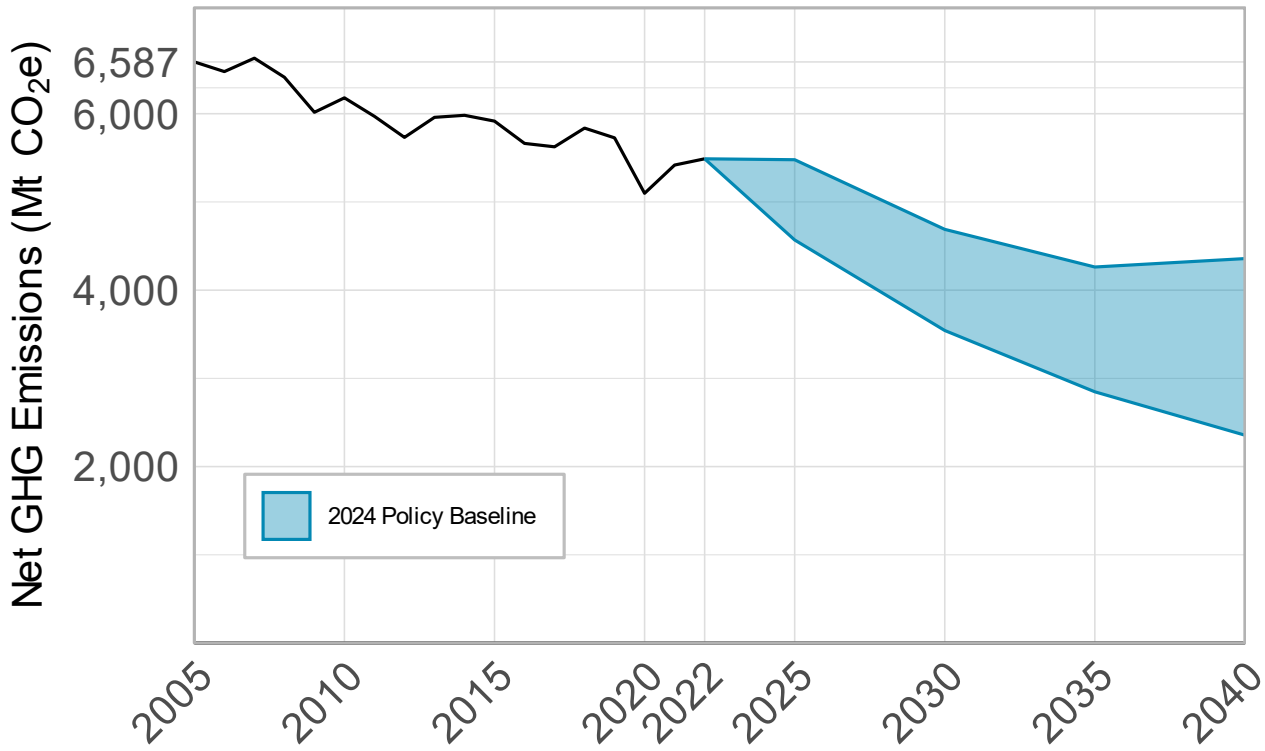
December 2024
U.S. Environmental Protection Agency
U.S. Department of Energy
U.S. Department of Agriculture

Background | U.S. GHG Emissions

This section focuses on the combined results of the energy system models, LULUCF models, and non-CO_2 modeling used in the BTR. Net GHG emission projections include sequestration from LULUCF models.

- **Combustion CO_2 projections** are from GCAM, USREP-ReEDS, and OP-NEMS.
- **Non-energy fossil fuel CO_2 projections** are from OP-NEMS.
- **Industrial process and product use CO_2 projections** are from OP-NEMS.
- **Non-CO_2 projections** are from EPA's non-CO_2 projections model and U.S. Department of Agriculture (USDA) agriculture-related projections.
- **LULUCF projections** are from GTM, FASOMGHG, and the USFS RPA Modeling System for forestry and USDA for land use and land use change.

Emissions | Net Greenhouse Gas Emissions

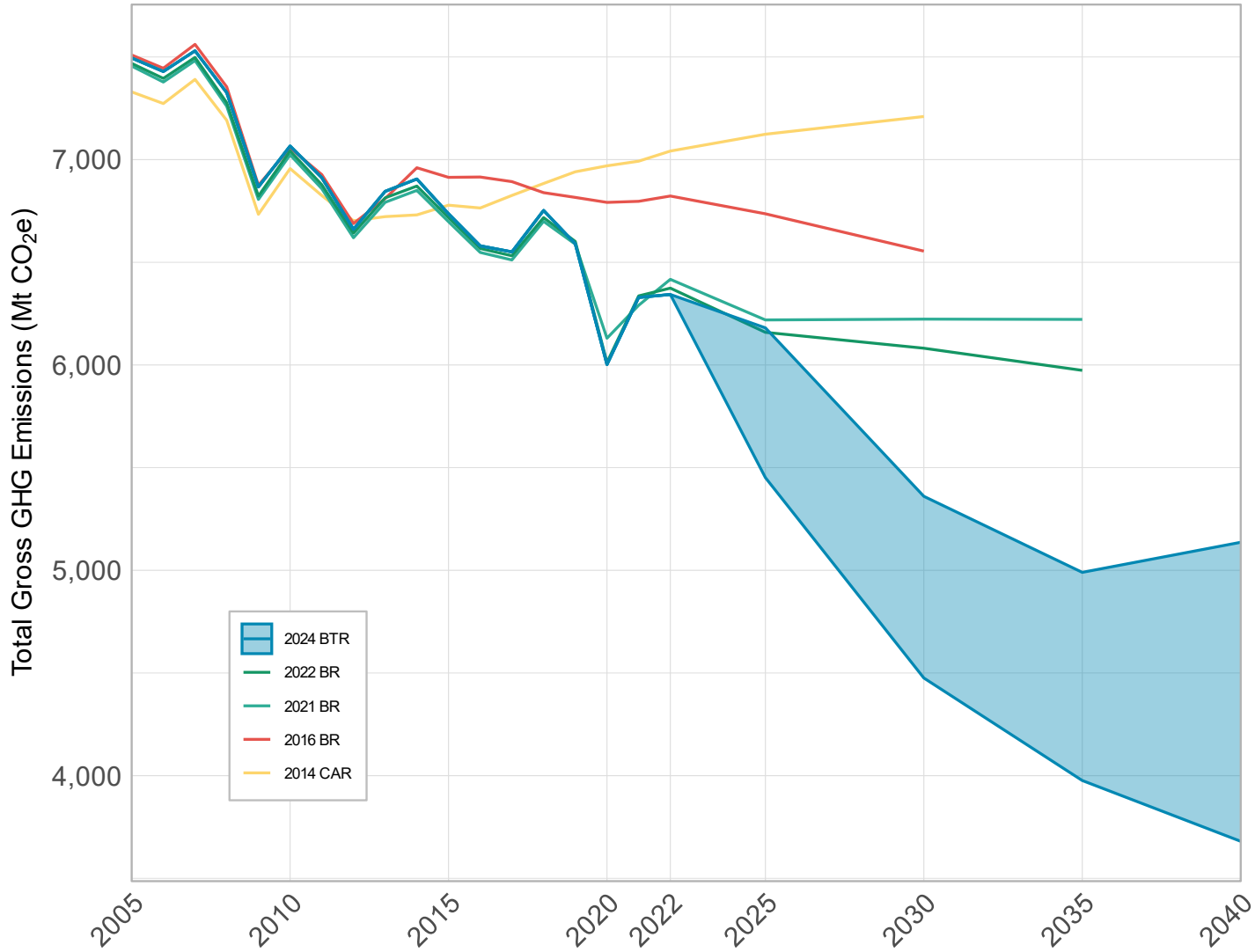


The full 2024 Policy Baseline sees the U.S. achieving **net GHG emission reductions** of:

- 29 – 46% in 2030, relative to 2005 levels
- 36 – 57% in 2035, relative to 2005 levels
- 34 – 64% in 2040, relative to 2005 levels

Source: First Biennial Transparency Report (2024)
Figure 3-35: U.S. Net GHG Emissions Projections

Emissions | Gross Greenhouse Gas Emissions



The 2022 Fifth Biennial Report (2022 BR) projected that **total gross emissions** would decline by 19% by 2030, relative to 2005 levels.

The 2024 Policy Baseline projects a 28-40% decline, a 9-21 percentage point decrease in total gross emissions compared to the 2022 BR.

Source: First Biennial Transparency Report (2024)
Figure 3-38: Gross Greenhouse Gas Emissions Projections by Report

Emissions | Greenhouse Gas Emissions by Gas and Sector (Mt CO_2e)

	Historical					Projected			
Gas	2005	2010	2015	2020	2022	2025	2030	2035	2040
CO_2	6,127	5,669	5,368	4,689	5,053	4,282 - 5,011	3,390 - 4,275	2,926 - 3,940	2,651 - 4,107
CH_4	795	808	764	735	702	639	597	577	567
N_2O	419	418	427	391	390	390	381	378	376
HFCs	122	152	161	170	183	123	82	64	49
PFCs	10	7	7	7	7	8	11	14	17
SF_6	20	12	8	8	8	9	11	13	16
NF_3	1	1	1	1	1	2	3	4	5
Energy	4,450	4,190	3,838	3,271	3,429	2,702 - 3,305	2,093 - 2,645	1,868 - 2,508	1,781 - 2,581
Transportation	1,900	1,730	1,742	1,592	1,771	1,683 - 1,867	1,334 - 1,743	1,051 - 1,643	870 - 1,581
Industrial Processes	371	365	370	368	383	321	289	279	282
Agriculture	582	599	615	600	593	579	593	593	593
Waste	192	183	172	172	167	164	161	158	154
Total Gross Emissions	7,495	7,066	6,736	6,002	6,343	5,451 - 6,181	4,475 - 5,360	3,976 - 4,990	3,680 - 5,136
LULUCF Sink	(908)	(886)	(820)	(904)	(854)	(883) - (702)	(933) - (671)	(1,129) - (728)	(1,324) - (779)
Total Net Emissions	6,587	6,180	5,916	5,098	5,489	4,569 - 5,479	3,543 - 4,689	2,848 - 4,262	2,356 - 4,358

Source: First Biennial Transparency Report (2024)
Table 3-2: Historical and Projected (2024 Policy Baseline) U.S. Greenhouse Gas Emissions by Gas: 2005-2040
Table 3-3: Historical and Projected (2024 Policy Baseline) U.S. Greenhouse Gas Emissions by Sector: 2005-2040

2024 U.S. Energy System Baselines

Projections from the 2024 Biennial Transparency Report

December 2024
U.S. Environmental Protection Agency
U.S. Department of Energy

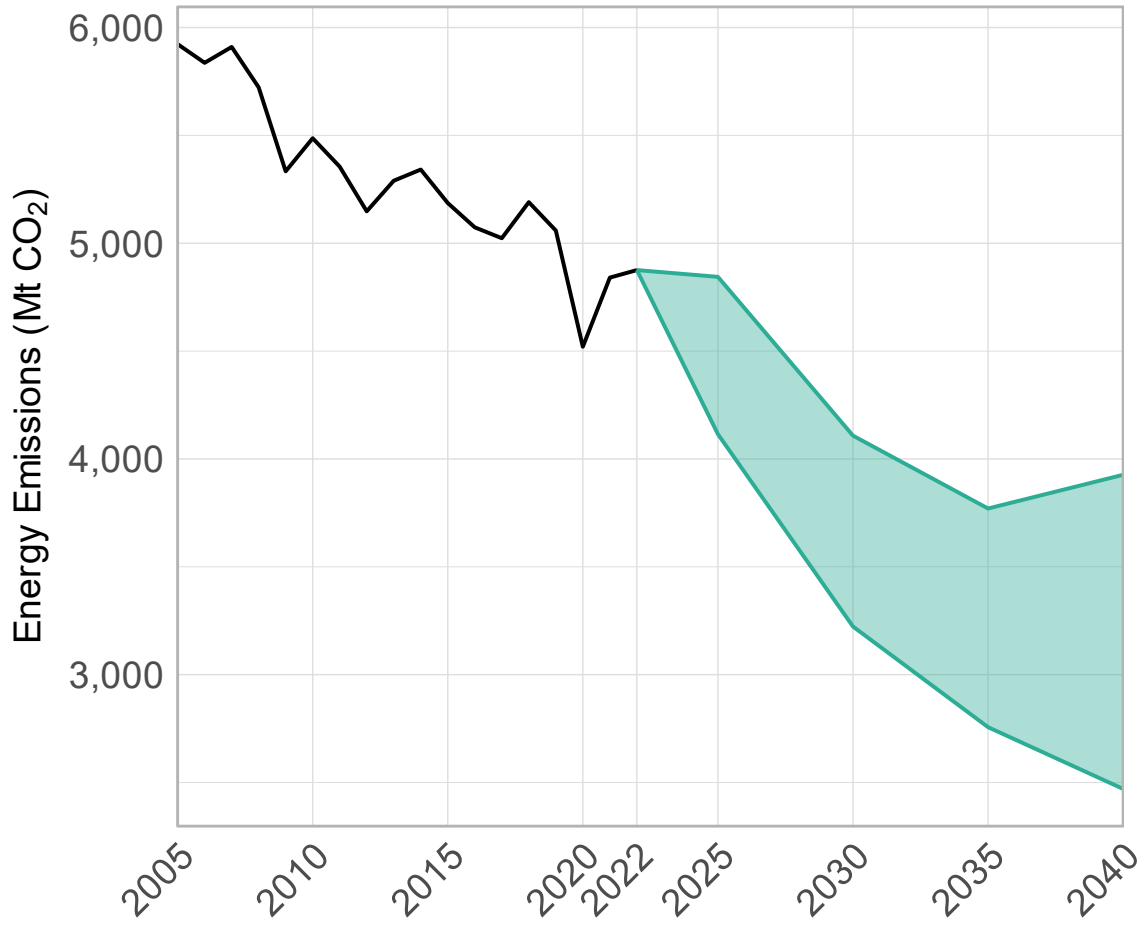
Background | Energy System Baselines

This section focuses on the results of the energy system models used in the BTR. Each of these models produces projections of the U.S. energy system based on representative market dynamics informed by policy and technology assumptions. These market dynamics compete fuels and technologies based on cost and performance.

Emissions | Energy-Related CO_2 Emissions

Relative to 2005 levels, **energy-related CO_2 emissions** in the 2024 Policy Baseline are projected to decline:

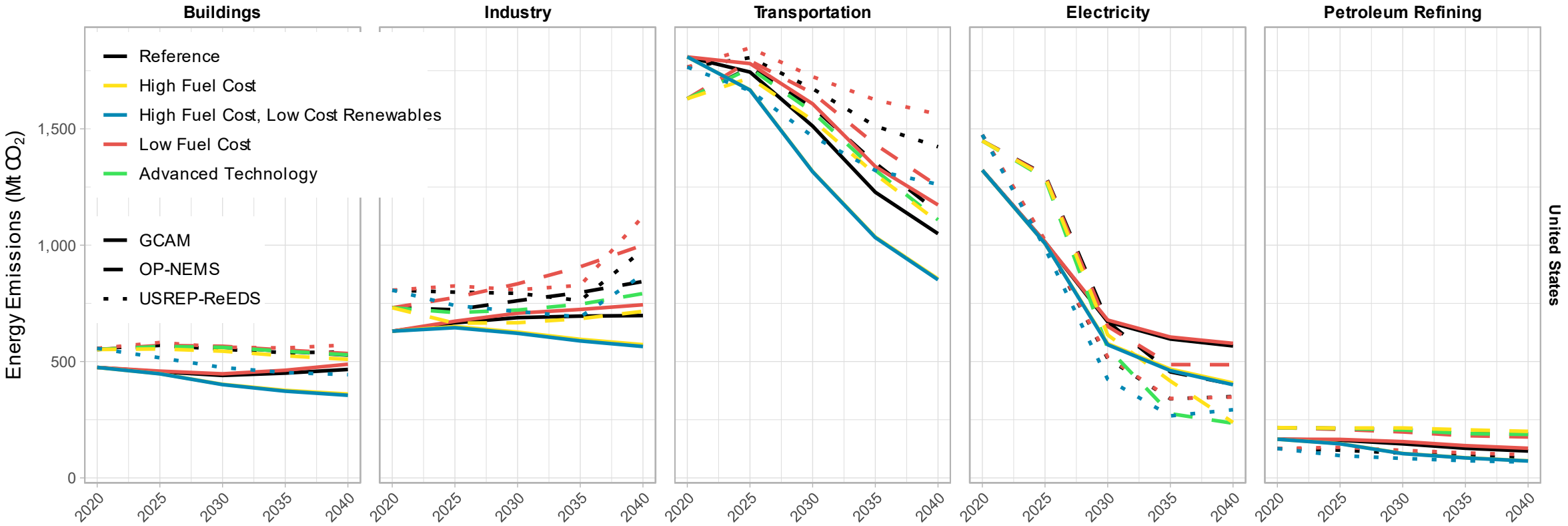
- 40 – 53% in 2030
- 42 – 59% in 2035
- 40 – 60% in 2040



Source: First Biennial Transparency Report (2024)

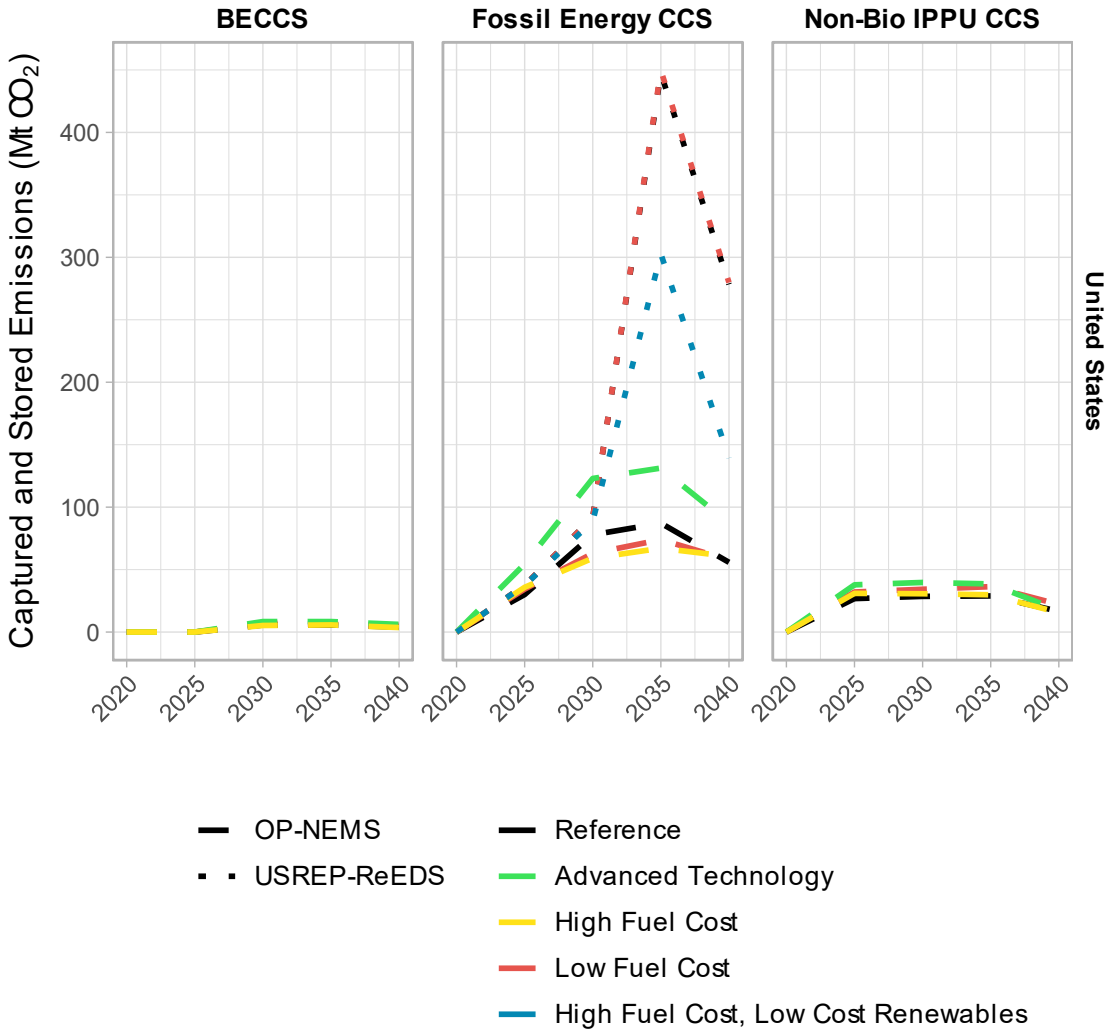
Figure 3-35: Historical and Projected CO_2 emissions in the Energy and Transportation Sectors (2005-2040)

Emissions | Energy-Related CO_2 Emissions



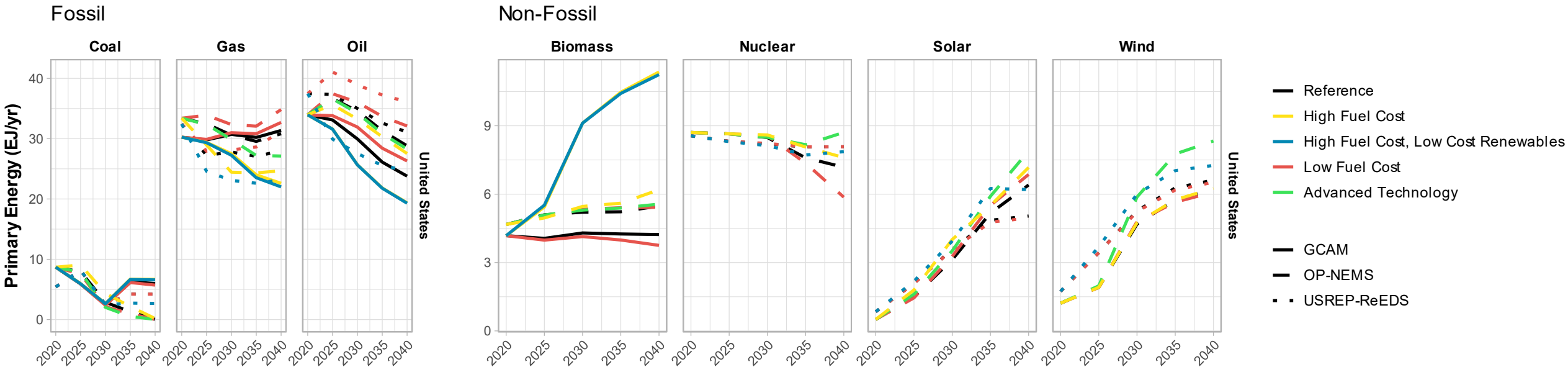
- **Economy-wide energy CO_2 emissions projections decline across scenarios**, except in one model that assumes a greater drop-off in electric vehicle sales and clean electricity generation after IRA tax credits expire.
- **Decarbonization in the electricity and transportation sectors drive economy-wide emissions reductions**. In these sectors, energy CO_2 emissions are projected to decline across scenarios, even in a sensitivity that assumes lower oil and gas costs.
- The direction of emissions projections in the buildings and industrial sectors depends on assumptions of oil and gas costs. When lower fuel costs are assumed, direct emissions increase due to increased gas consumption. In one model, industrial emissions increase significantly after the expiration of the IRA 45Q tax credit for carbon sequestration.

Emissions | Carbon Capture and Storage (CCS)



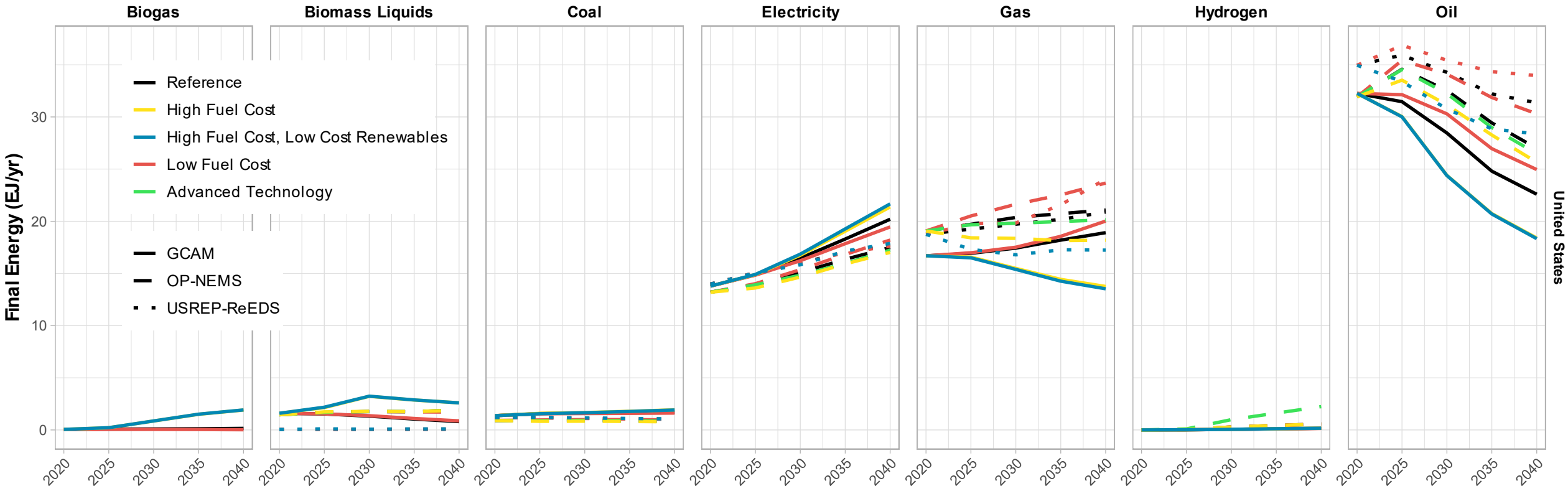
- 334-858 MMT CO_2 are projected to be captured cumulatively from 2020 through 2040.
- Nearly all of the captured CO_2 is projected to come from CCS on fossil fuel-powered electricity generation, with relatively small contributions from bioenergy with CCS (BECCS) and industrial processes and product use with CCS (IPPU CCS).
- Increased capture is driven by the IRA 45Q tax credit. Once this credit expires, capture amounts decline across most scenarios.

Primary Energy | Primary Energy by Source



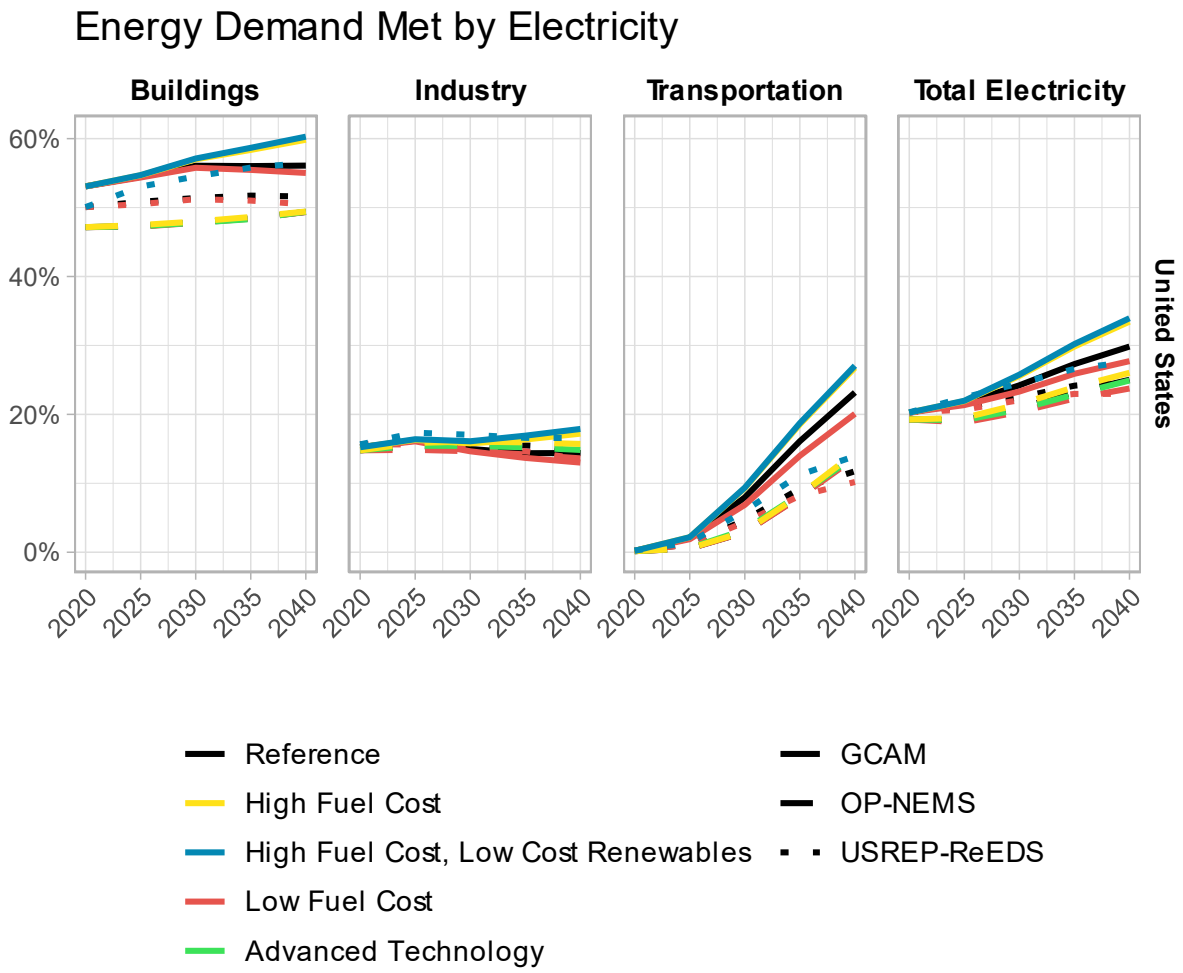
- **Solar and wind** increase rapidly across scenarios driven by declining technology costs and supported by incentives. Solar primary energy reaches 5-8 EJ and wind primary energy reaches 6.1-8.3 EJ in 2040.
- **Biomass** increases rapidly in one model but increases more moderately across all other models/scenarios. Biomass primary energy reaches 3.8-11.4 EJ in 2040.
- **Nuclear** ranges widely based on assumptions of competing fuels for electricity generation, namely gas. In scenarios of lower oil and gas costs, nuclear energy declines. Nuclear primary energy reaches 3.1-8.7 EJ in 2040.
- **Coal** declines across models and scenarios through 2030, after which projections diverge due to differing assumptions on the availability of coal with carbon capture and storage (CCS). Coal primary energy reaches 0.02-6.67 EJ in 2040.
- **Gas** declines in most models/scenarios through 2030, though outlooks differ depending on assumptions of oil and gas costs. Gas primary energy reaches 22-34.8 EJ in 2040.
- **Oil** declines across all models/scenarios, with the greatest declines occurring in scenarios that assume higher oil and gas costs. Oil primary energy reaches 19.3-36.1 EJ in 2040.

Final Energy | Final Energy by Source



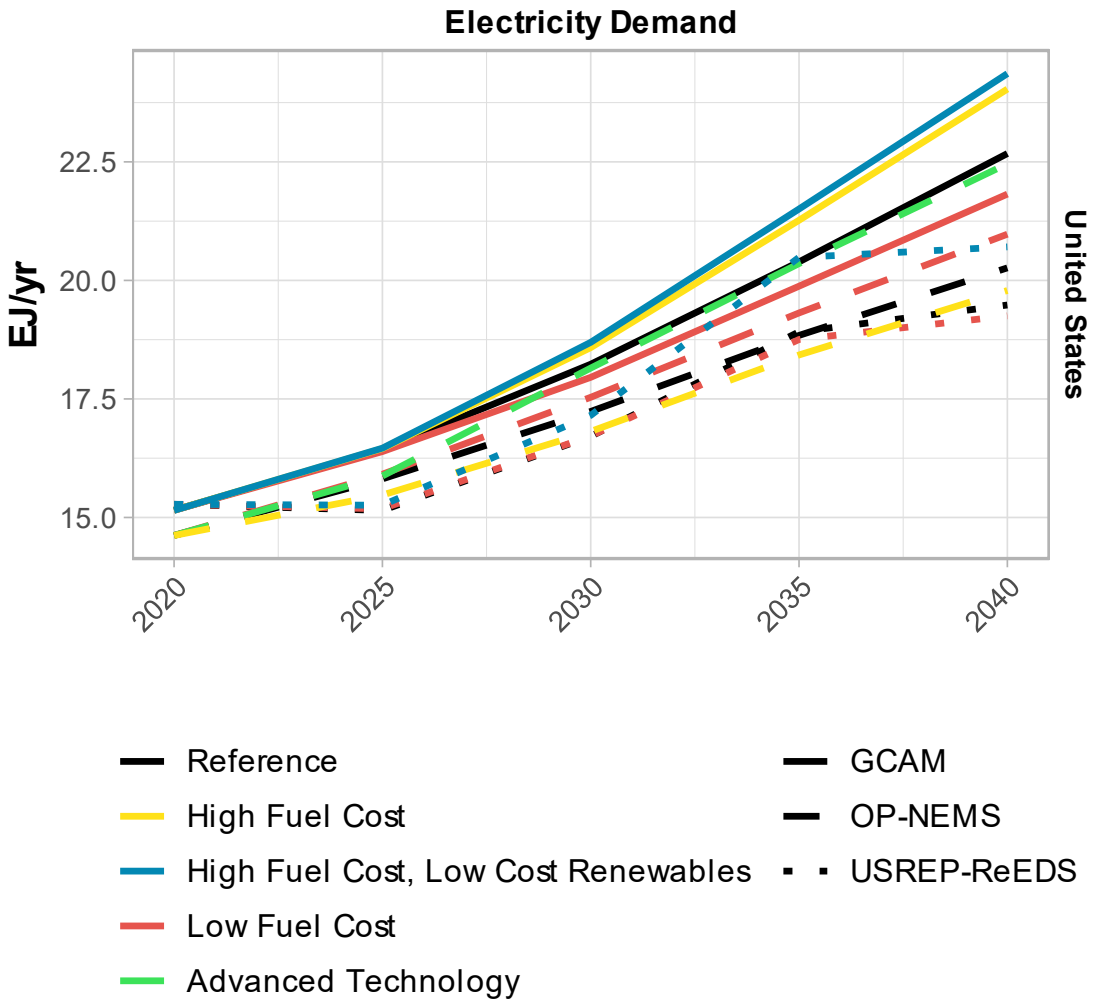
- Across all scenarios and models, final energy demand is increasingly met by **electricity**.
- Outlooks on final energy demand met by **gas** range based on assumptions of oil and gas supply. More final energy demand is met by gas in scenarios of lower oil and gas costs.
- Final energy demand met by **oil** decline across all but one model and scenario, reaching 11.2-36.1 EJ in 2050.

Final Energy | Energy Demand Met by Electricity



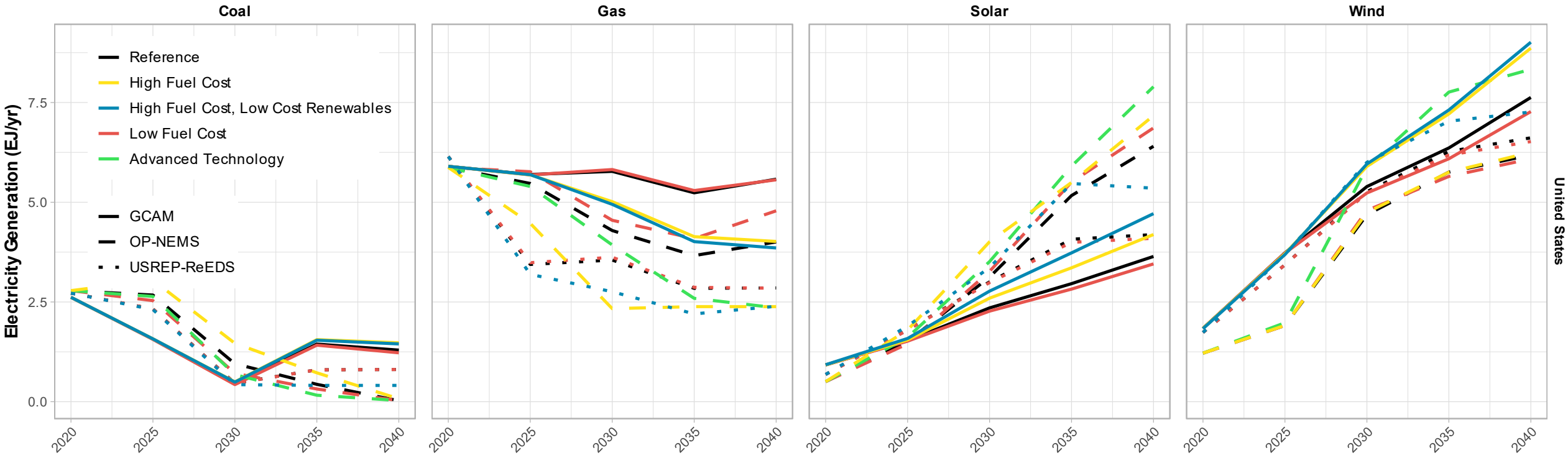
- Energy demand met by electricity in **buildings** increases across all models and scenarios, ranging from 49%-60% in 2040.
- Energy demand met by electricity in **transportation** also increases across all models and scenarios, driven by IRA and BIL funding as well as declining costs of electric vehicle batteries. The share of final energy demand met by electricity ranges from 10%-27% in 2040.
- Energy demand met by electricity in **industry** is relatively constant, with some increases after 2035 in scenarios of advanced technology costs and high oil and gas costs.

Electricity | Load Growth



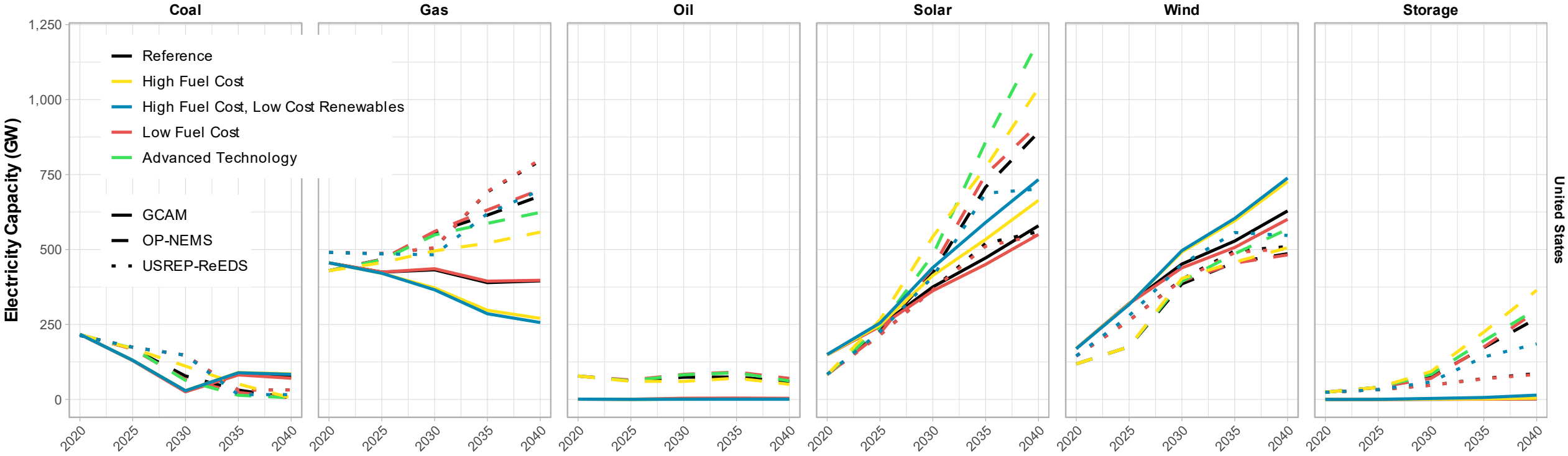
- **Electricity demand (load) increases across all scenarios**, including scenarios of low oil and gas costs.
- In one model, electricity demand tapers off after 2035 due to the expiration of clean vehicle tax credits in the IRA. The other models do not exhibit this same trend.
- Note that these projections do not include the potential additional load growth from increased data center demand.

Electricity | Generation by Source



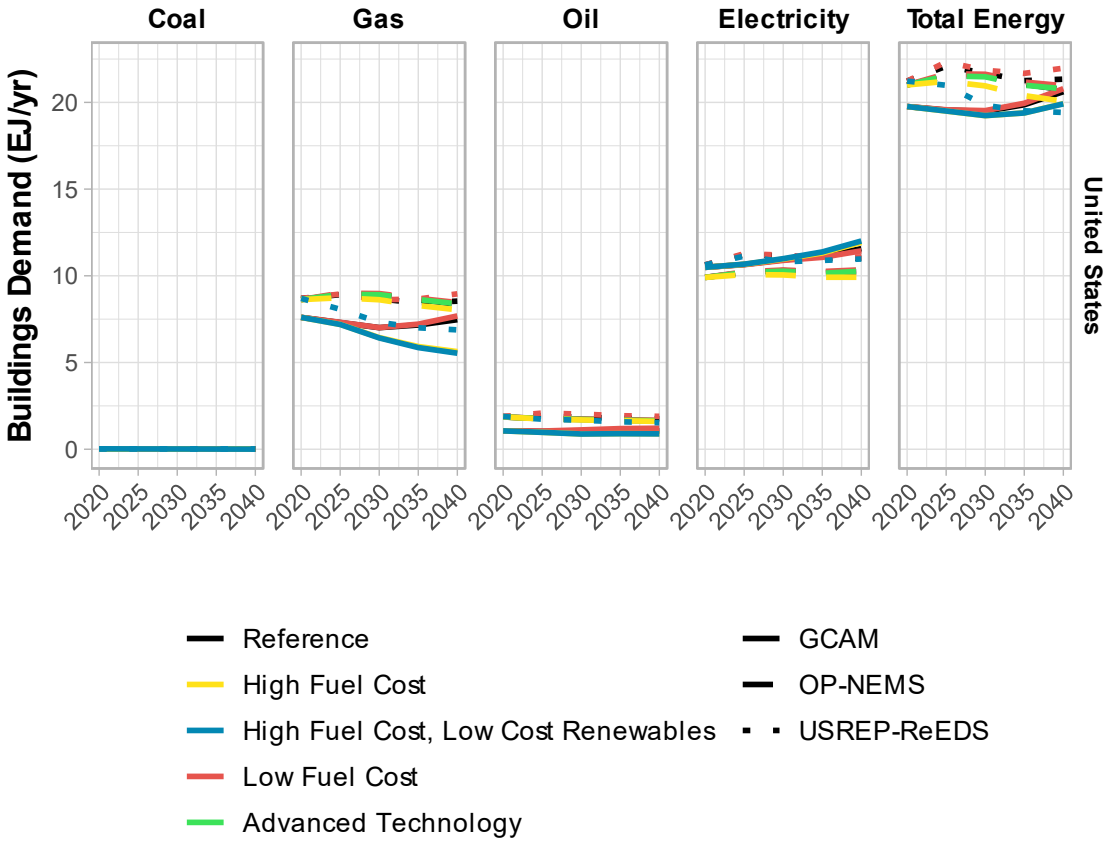
- The share of electricity generation from renewables and nuclear reaches 65%-85% in 2035 and 68%-89% in 2040.
- Generation from solar and wind reach 3.5-7.9 EJ/yr and 6.1-9 EJ/yr in 2040, respectively.
- Generation from gas stays relatively stable across all models and sensitivities.
- Generation from coal declines across all models, with increases only supported when CCS technologies are available and deployed. In 7 of the 11 scenarios modeled, coal generation declines to nearly zero due to the cost competitiveness of alternative sources.
- Generation from oil does not exceed 0.07 EJ/yr across models and scenarios.

Electricity | Capacity by Source



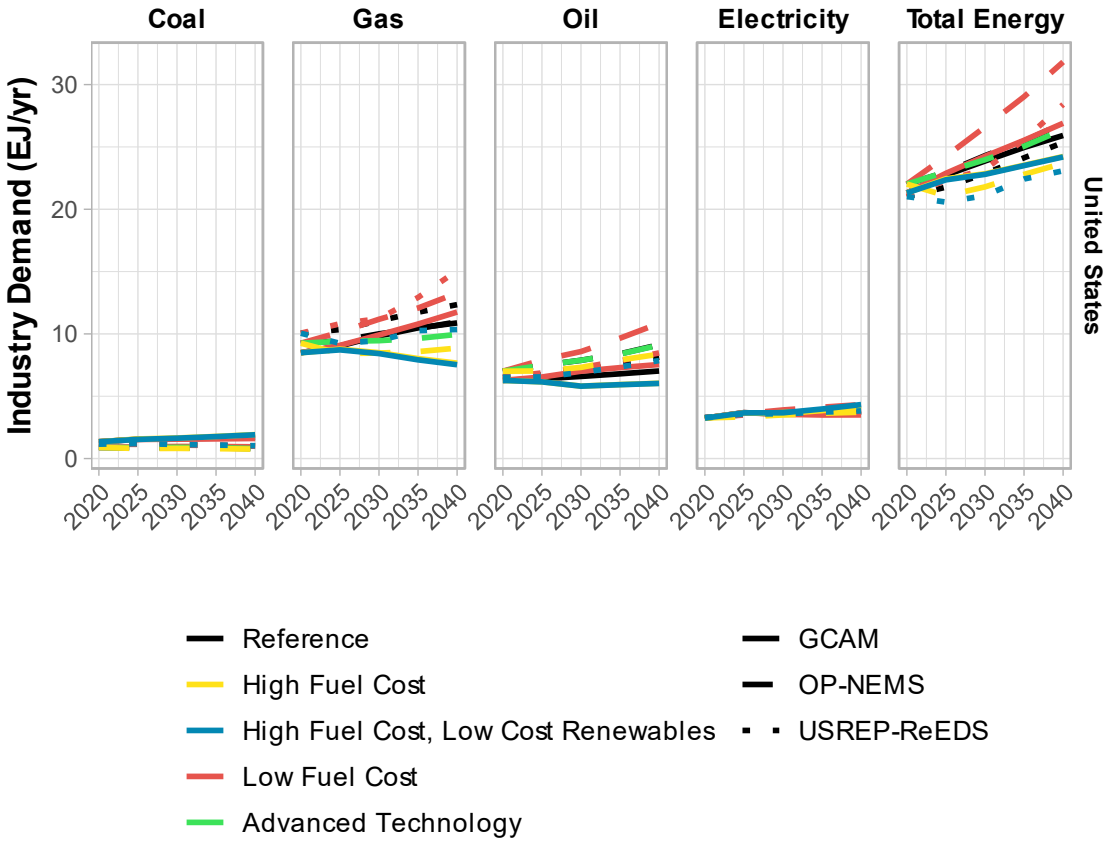
- Total electricity capacity increases across models and scenarios
- Solar capacity grows to 547-1,196 GW in 2040. Solar capacity grows rapidly in two of the three models used. One model shows a plateau in solar capacity after the expiration of the IRA clean electricity tax credits.
- Wind capacity also grows, reaching 482-738 GW in 2040. In two of three models, capacity additions slow once IRA clean electricity tax credits expire.
- Gas capacity grows or declines depending on model and scenario. In scenarios that assume lower oil and gas costs, gas capacity increases.
- Coal capacity declines across all models and scenarios. In one model, coal capacity reaches 0 GW by 2040.

Buildings | Energy Demand by Source



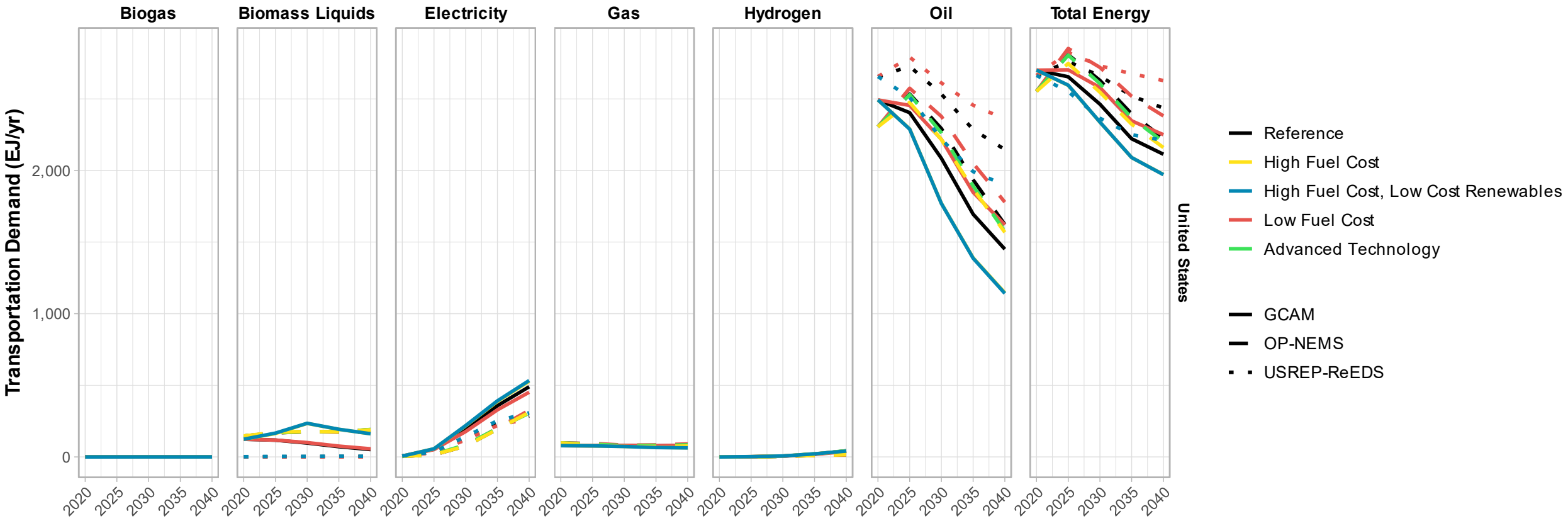
- Trends in buildings energy demand ranges from increasing 8.5% from 2020-2040 to declining 0.5% over the same period.
- Energy demand declines in scenarios of low oil and gas supply (high fuel costs). Energy demand generally increases in scenarios with reference assumptions of oil and gas supply.
- Electricity demand is generally stable, and increases in models where buildings energy demand increases.
- This means that the share of demand that is met through electricity increases to 49%-60% in 2040.
- Gas demand generally declines across models, particularly in scenarios with high oil and gas costs.

Industry | Energy Demand by Source



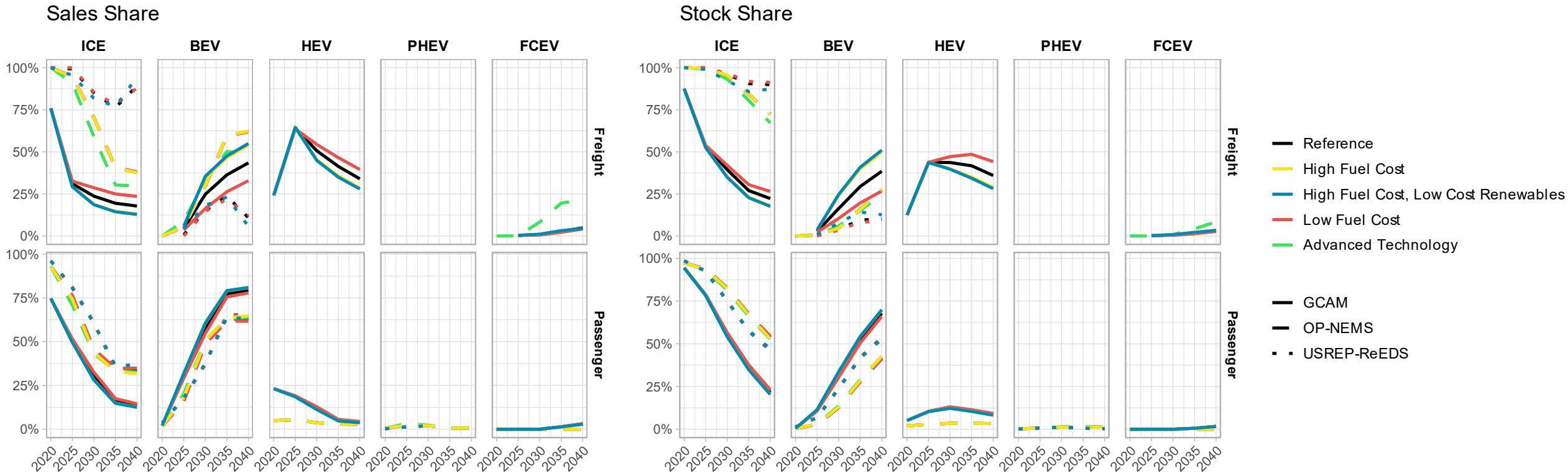
- Energy demand in the industrial sector increases across models and scenarios due to increased onshoring and higher levels of economic activity. Energy demand reaches 24.7-36.2 EJ in 2050.
- This increase in total energy demand in the industrial sector corresponds to an increase in **gas** and **oil** demand.
- **Electricity** demand increases marginally across models, with the share of final demand from electricity reaching 13%-21% in 2050.

Transportation | Energy Demand by Source



- Energy demand in the transportation sector declines across all models and scenarios, driven by increased fuel economy from updated NHTSA CAFE standards and increased use of electricity, a higher efficiency energy carrier.
- Transportation energy demand reaches 19.7-26.3 EJ in 2040.
- Transportation demand for oil declines across all scenarios due to increased fuel economies and electrification.

Transportation | Vehicle Sales and Stock by Type



- Battery electric vehicle (BEV) sales are projected to reach 39-61% of total light duty vehicle (LDV) sales in 2030, achieving the national target of 50% ZEV sales by 2030. They reach 62%-84% of total LDV sales in 2040.
- BEV sales are projected to reach up to 70% of total freight vehicles by 2040.
- Models differ in how they represent consumer behavior after the IRA clean vehicle credits expire in 2032.
- Vehicle stocks lag vehicle sales due to stock rollover dynamics. BEVs are projected to reach 42%-71% of total LDV stock and 9%-54% of total freight stock in 2040.

Energy and Emissions | Data Availability

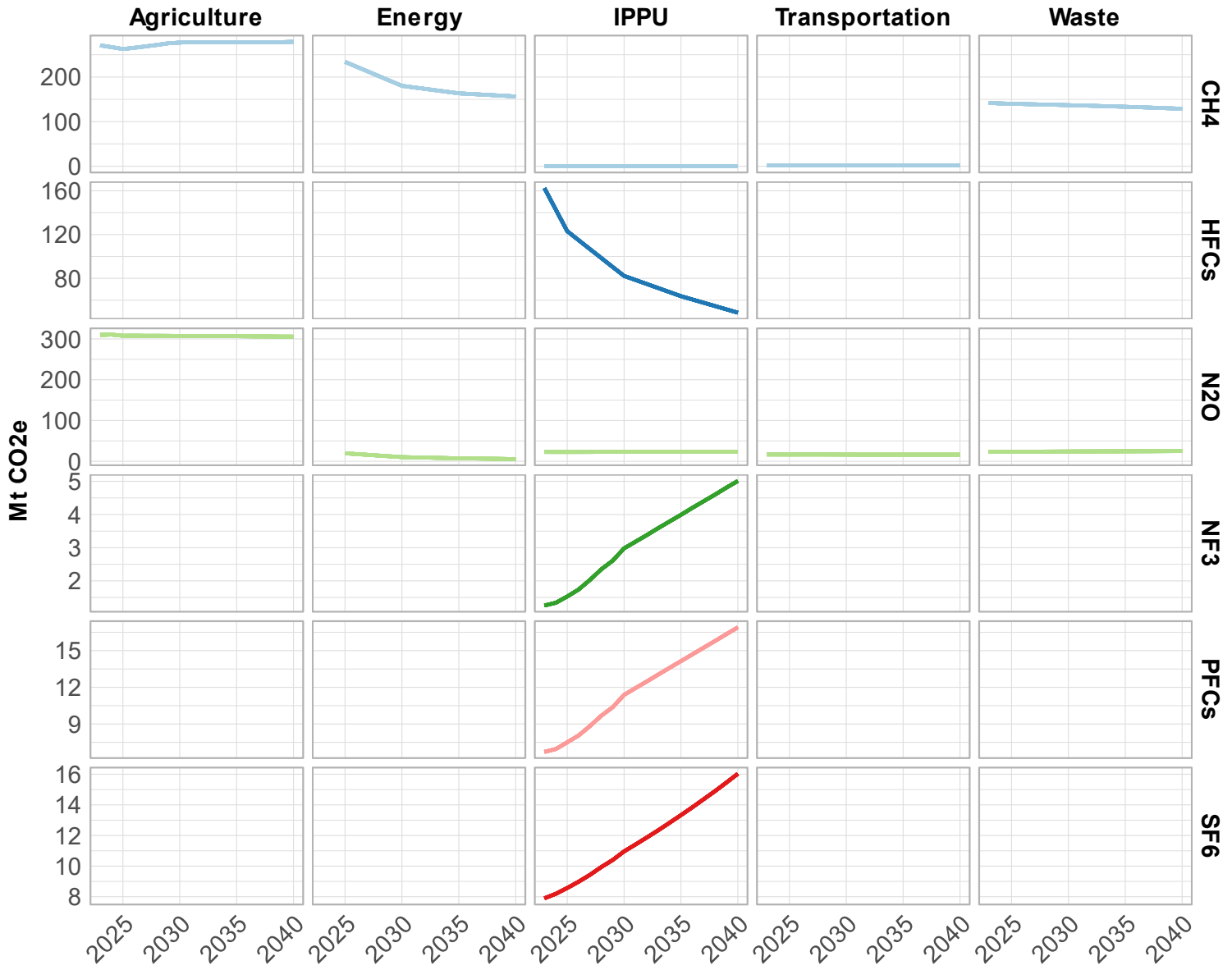
Detailed energy system and emissions data will be available as part of the Energy Modeling Forum 37 Special Issue on Deep Decarbonization & High Electrification Scenarios for North America. The data repository will be published alongside the final special issue in Spring of 2025.

2024 U.S. Non-CO_2 Emissions

Projections from the 2024 Biennial Transparency Report

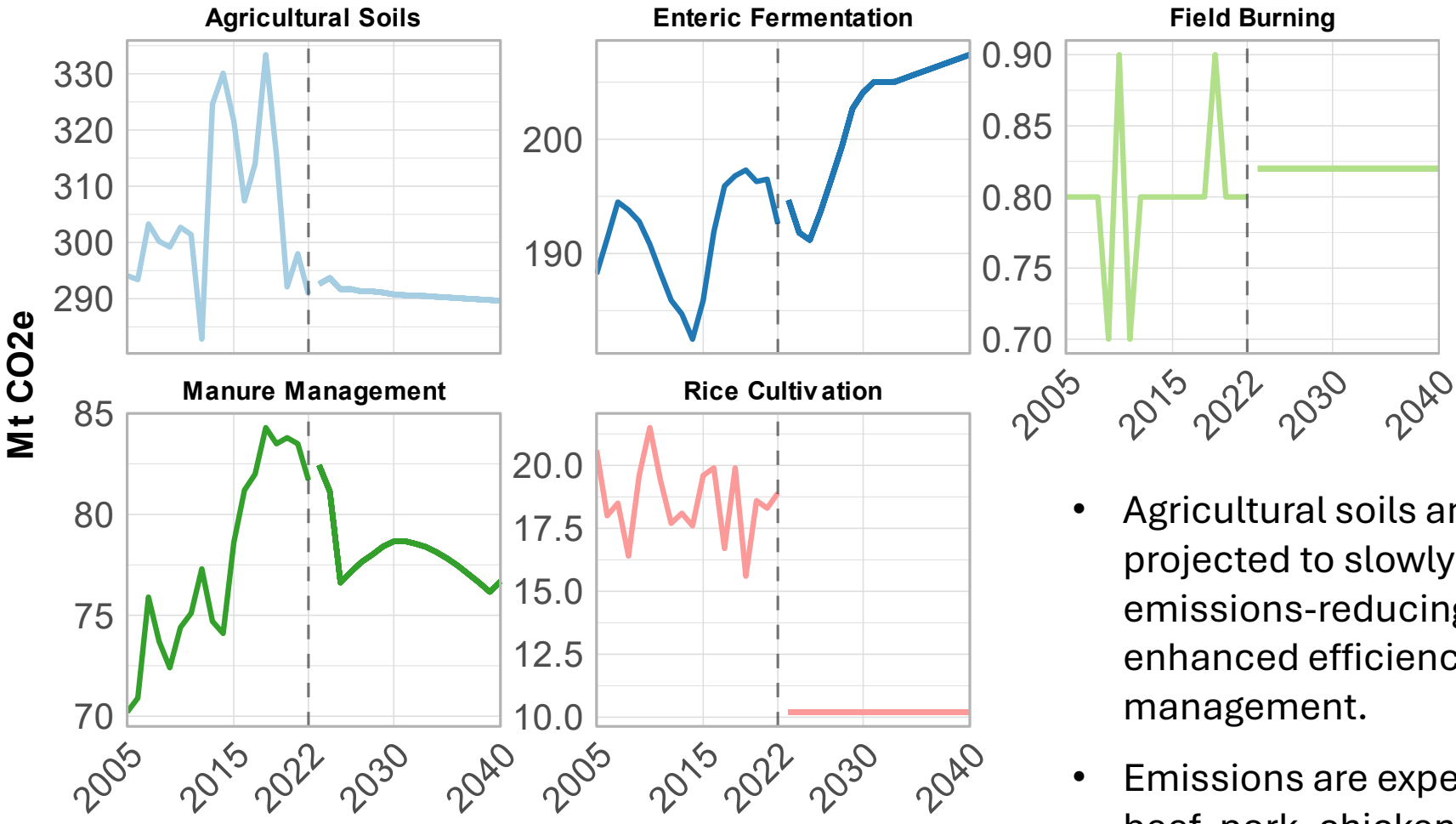
U.S. Environmental Protection Agency
U.S. Department of Agriculture

Non-CO_2 | Emissions by Gas and Sector



CH_4: Methane
HFC: Hydrofluorocarbons
N_2O: Nitrous Oxide
NF_3: Nitrogen Trifluoride
PFC: Perfluorocarbons
SF_6: Sulfur Hexafluoride

Non-CO_2 | Agriculture

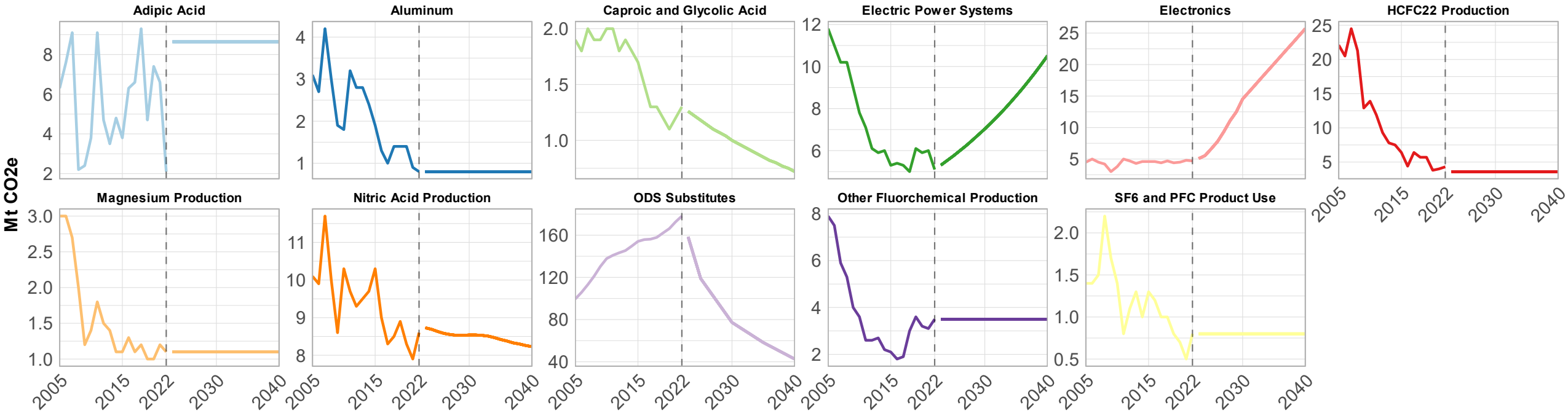


- Agricultural soils and manure non-CO_2 emissions are projected to slowly decrease with the introduction of emissions-reducing practices and technologies, such as enhanced efficiency fertilizers and manure management.
- Emissions are expected to rise modestly as demand for beef, pork, chicken, and dairy products grows due to rising U.S. and global populations and income levels.

Non-CO_2 | Energy

Energy-related CH_4 emissions are projected to decline by 49% in 2030, 54% in 2035, and 56% in 2050, relative to 2005 levels – driven primarily by regulations that cover emissions in the oil and gas sector.

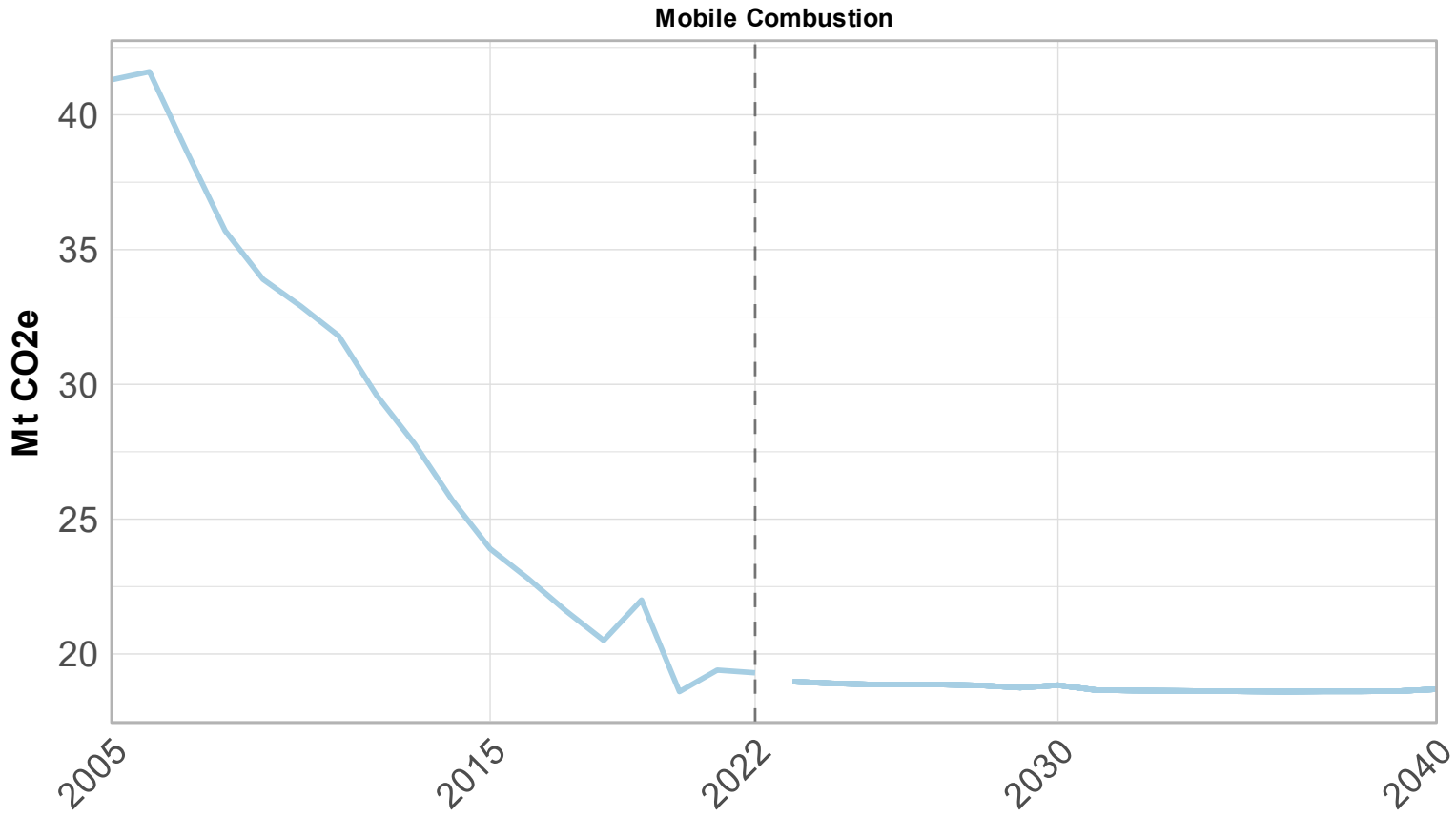
Non-CO_2 | Industrial Processes



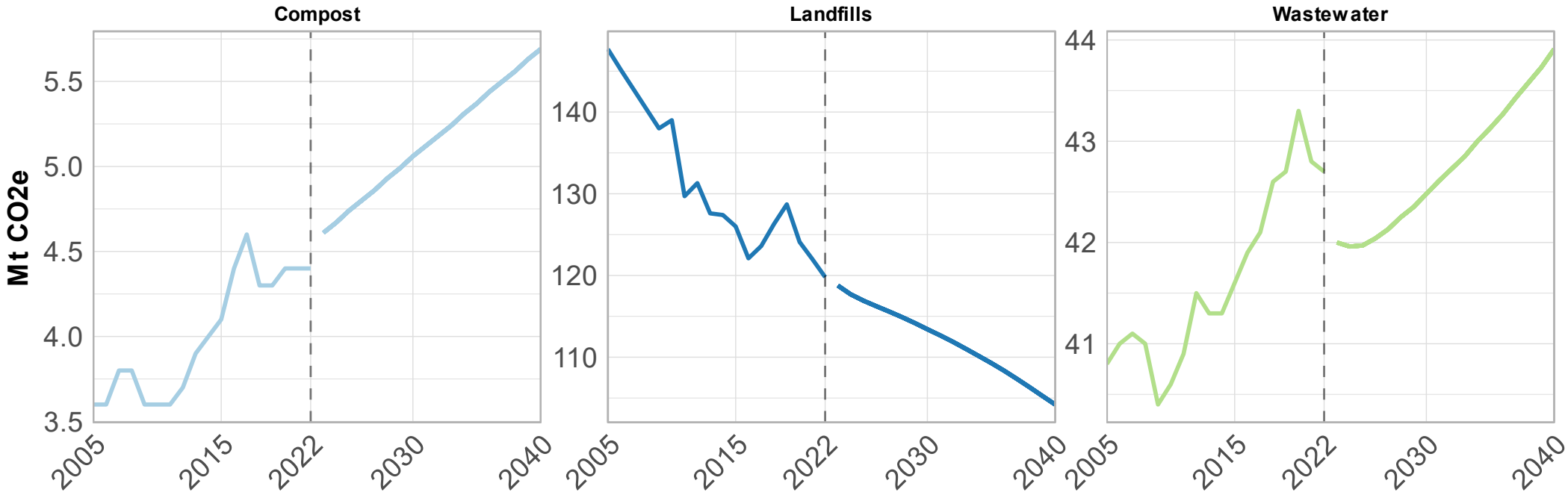
- Non-CO_2 emissions are projected to rise due to increased electronics manufacturing and expansion of electric power systems.
- HFC and PFC emissions are projected to decline dramatically as the AIM Act implementation reduces the use of fluorinated gases.
- Though not shown, N_2O emissions are projected to stay constant at 3.8 Mt CO_2e for N_2O product use.

Non-CO_2 | Transportation

Transportation N_2O and CH_4 emissions are projected to level off under current policies.



Non-CO_2 | Waste



- Emissions from the waste sector are projected to decrease by 16% in 2030, 18% in 2035, and 20% in 2040, relative to 2005 levels.
- Landfills are trending larger and would be subject to Clean Air Act New Source Performance Standards that require the installation of gas collection systems. Organics and food waste diversion programs are also increasingly diverting waste from landfills, resulting in lower CH_4 generation.
- Remote sensing data is increasingly being used to identify and target remediation of large emissions from the waste sector. The trends toward increasing collection of CH_4 from municipal waste and wastewater are partially offset by population growth.

Non-CO_2 | Data Availability

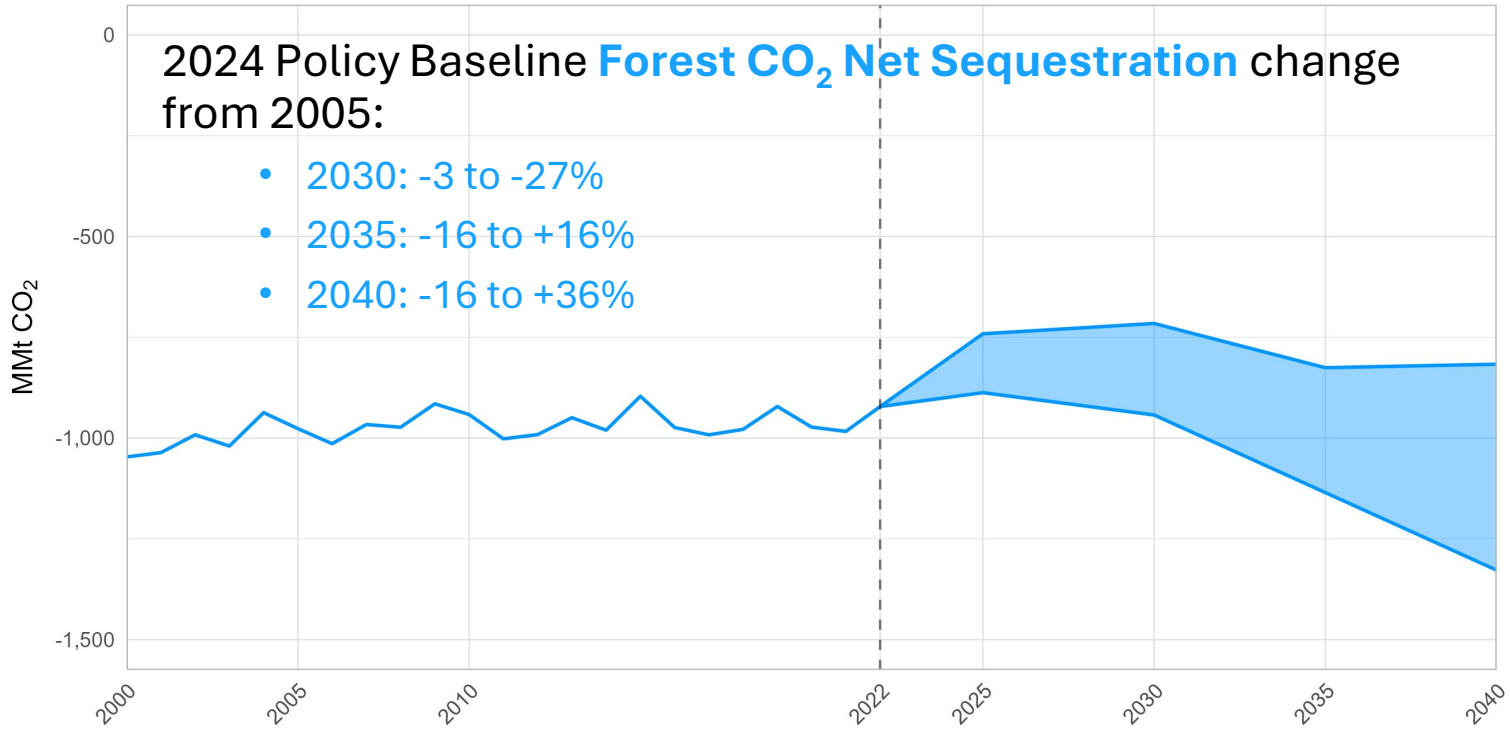
Detailed non-CO_2 emissions projections will be available on EPA's website and through the EPA's Non-CO_2 Greenhouse Gas Data Tool in January 2025. The data will be accompanied by an update to the EPA's Non-CO_2 Greenhouse Gas Emission Projections & Mitigation Report, to be published later in 2025.

2024 U.S. Land Use, Land Use Change, and Forestry

Projections from the 2024 Biennial Transparency Report

U.S. Environmental Protection Agency
U.S. Department of Agriculture

LULUCF | Forest CO_2 Net Sequestration



2024 Policy Baseline **Land Use, Land Use Change, and Forestry (LULUCF) Net Sequestration** change from 2005:

- 2030: -3 to -23%
- 2035: -26 to +24%
- 2040: -14 to +46%