



**MEMORANDUM FOR:** Angelina LaRose  
Assistant Administrator for Energy Analysis

**FROM:** Jim Diefenderfer  
Director, Office of Long-Term Energy Modeling

**SUBJECT:** Summary of *Annual Energy Outlook 2025 (AEO2025)* Working Group for Electricity, Coal, Renewables, and Nuclear held on October 25, 2023

The working group presentation summarized the proposed model enhancements for the *Annual Energy Outlook 2025 (AEO2025)* for electricity, coal, renewables, and nuclear. The presentation materials included these updates and are available as a separate document on EIA.gov.

## Overview

Because we are not publishing an *Annual Energy Outlook* in 2024, AEO2025 will include an increased number of model enhancements compared with previous years. Developments for AEO2025 include introducing hydrogen representation; improving carbon capture, transportation, and sequestration modeling; improving electric power sector modeling; improving technology representation; and more comprehensively addressing existing and upcoming laws and regulations. This working group focused only on improving electric power sector modeling. Future working groups will focus on other model development efforts.

## Model updates

EIA staff summarized the proposed model updates and enhancements for AEO2025, which include:

- Develop the model capable of representing a credible zero-carbon emissions electric power sector through one or more likely policy mechanisms
- More fully represent provisions of the Inflation Reduction Act of 2022 (IRA)
- Improve model performance
- Update resource supply curves for hydro, geothermal, biomass, wind, and solar
- Modernize the optimization of the NEMS Electricity Market Module (EMM)
- Improve model convergence

We also discussed EIA's parallel effort to explore and design its next generation of long-term energy models ([Project BlueSky](#)), independent of the AEO2025 analysis and publication schedules. We are still

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in an early exploratory and experimental phase and plan to develop an initial prototype model during 2024 as part of this effort.

We concluded the presentation with a discussion our long-term plans for model enhancements in AEO2025 and beyond.

We informed participants that another working group with development activity updates for AEO2025 will take place in spring 2024, with a subsequent working group with preliminary results in late summer 2024.

The meeting then opened for questions and comments about updates we are considering for AEO2025 and beyond. We received no questions from the audience.

## Attendees

We hosted the working group meeting entirely online, and 89 people attended, including EIA staff and external participants. Attendees represented several organizations, including:

- Congressional Budget Office
- U.S. Department of Defense
- U.S. Department of Energy
- Electric Power Research Institute
- Energy Canada
- ICF Consulting
- Midcontinent Independent System Operator
- National Aeronautics and Space Administration
- National Mining Association
- Natural Resources Defense Council
- Nuclear Energy Institute
- OnLocation
- PJM Interconnection
- Resources for the Future
- Rhodium Group
- Sandia National Laboratory
- Sargent & Lundy
- Solar Energy Industries Association
- Southwest Power Pool
- Wartsila

A full list of attendees is provided below.

External participants.

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<b>First Name</b>	<b>Last Name</b>	<b>Organization</b>
David	Adler	Congressional Budget Office
Chris	Kerestes Rodriguez	Department of Defense
Lisette	Cabanas	Department of Defense
Andrew	Foss	Department of Energy
Jai-woh	Kim	Department of Energy
James	Easton	Department of Energy
Jordan	Kislear	Department of Energy
Marc	Melaina	Department of Energy
Mike	Kolian	Department of Energy
Paul	Spitsen	Department of Energy
Reginald	Mitchell	Department of Energy
Geoffrey	Blanford	Electric Power Research Institute
Romey	James	Electric Power Research Institute
Tom	Wilson	Electric Power Research Institute
Robin	White	Energy Canada
Thomas	Dandres	Energy Canada
Victor	Keller	Energy Canada
Boddu	Venkatesh	ICF Consulting
Tony	Hunziker	Midcontinent Independent System Operator National Aeronautics and Space Administration
Mohit	Mehta	Administration
Leslie	Coleman	National Mining Association
Amanda	Levin	Natural Resources Defense Council
Julianne	McCallum	Nuclear Energy Institute
Matt	Crozat	Nuclear Energy Institute
Frances	Wood	OnLocation
Pete	Whitman	OnLocation
Sharon	Showalter	OnLocation
Thomas	Sterle	OnLocation
Emmanuele	Bobbio	PJM
Mojgan	Hedayati	PJM Interconnect
Aaron	Bergman	Resources for the Future
Anna	van Brummen	Rhodium Group
Ben	King	Rhodium Group
Hannah	Kolus	Rhodium Group
Paul	Sharps	Sandia National Laboratory
Joshua	Junge	Sargent & Lundy
Tyler	Thompson	Solar Energy Industries Association
Joshua	Norton	Southwest Power Pool
Alex	Espejo	Wartsila

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U.S. Energy Information Administration Staff

<b>First Name</b>	<b>Last Name</b>
Katherine	Antonio
Erin	Boedecker
Richard	Bowers
Kien	Chau
Singfoong	Cheah
Jonathan	Church
Michael	Cole
Anna	Cororaton
Jim	Diefenderfer
Kenneth	Dubin
Kathryn	Dyl
Mindi	Farber-DeAnda
Alexander	Felhofer
David	Fritsch
Peter	Gross
Tyler	Hodge
Patricia	Hutchins
Jonathan	Inbal
Kevin	Jarzomski
Scott	Jell
Christina	Jenq
Mackenzie	Jones
Ari	Kahan
Augustine	Kwon
Angelina	LaRose
Vikram	Linga
Nilay	Manzagol
Cara	Marcy
Laura	Martin
Alexander	Mey
Mark	Morey
Kevin	Nakolan
Christopher	Peterson
Catherine	Prendergast
Suparna	Ray
Sauleh	Siddiqui
Nicholas	Skarzynski
Matthew	Skelton
Susanna	Smith
John	Staub
Manussawee	Sukunta
John	Taber

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Edward	Thomas
Stephanie	Tsao
Nina	Vincent
James	Willbanks