

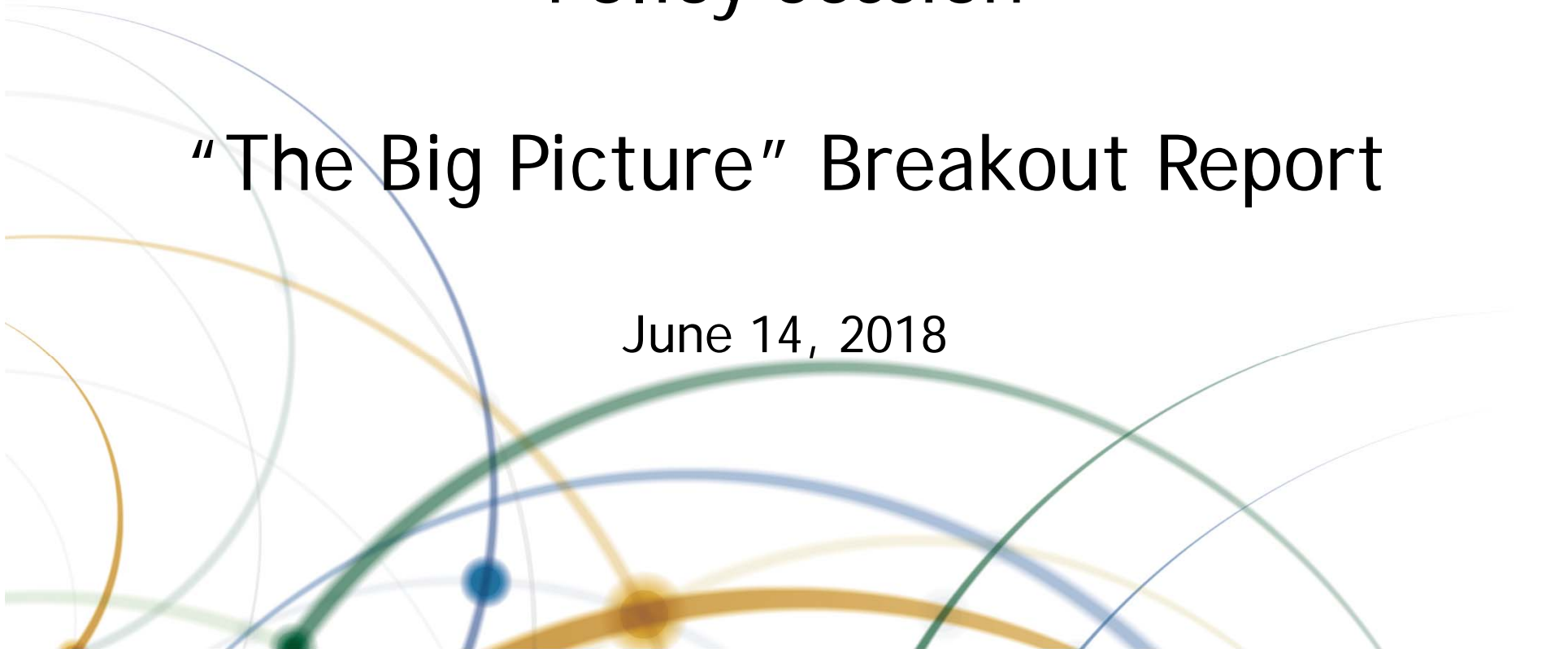
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TRANSPORTATION RESEARCH BOARD

# June 2018 Executive Committee Policy Session

## “The Big Picture” Breakout Report

June 14, 2018



# Key Themes

- Costs of noncarbon electricity generation have declined steadily, independent of fossil fuel market volatility
- Value and effectiveness of EV uptake will vary with regional density and user objectives for mobility
- There are many use scenarios for EVs and shared mobility - individual choices will reflect individual circumstances
- The mobility system has a large installed base and many moving parts - modeling how EVs can fit and how EV use may grow is challenging (globally and domestically)
  - User choices and behaviors
  - Paths for technology development and improvement
  - Policy options and objectives
- Basic drivers:
  - Core battery cost (vehicle range varies with battery cost)
  - Battery density    -- Charging time    -- Externalities

# Potential Actions

- Identify distinct factors that influence EV technical progress and EV uptake/acceptance to drive scenario planning exercises
  - Use surveys or “idea-a-thons” /hackathons to elicit factors influencing uptake/acceptance of EVs and new mobility alternatives
  - How are EVs, shared mobility, and automated services linked?
- Clarify environmental and other implications of increased use of EVs and the electrical grid for mobility
  - How rapidly can electricity generation decarbonize?
  - Impacts on the grid itself (load challenges or a stabilizing influence?)
- Use CRP-supported research to
  - Develop and standardize data and data requirements
  - Identify policy options and tradeoffs