

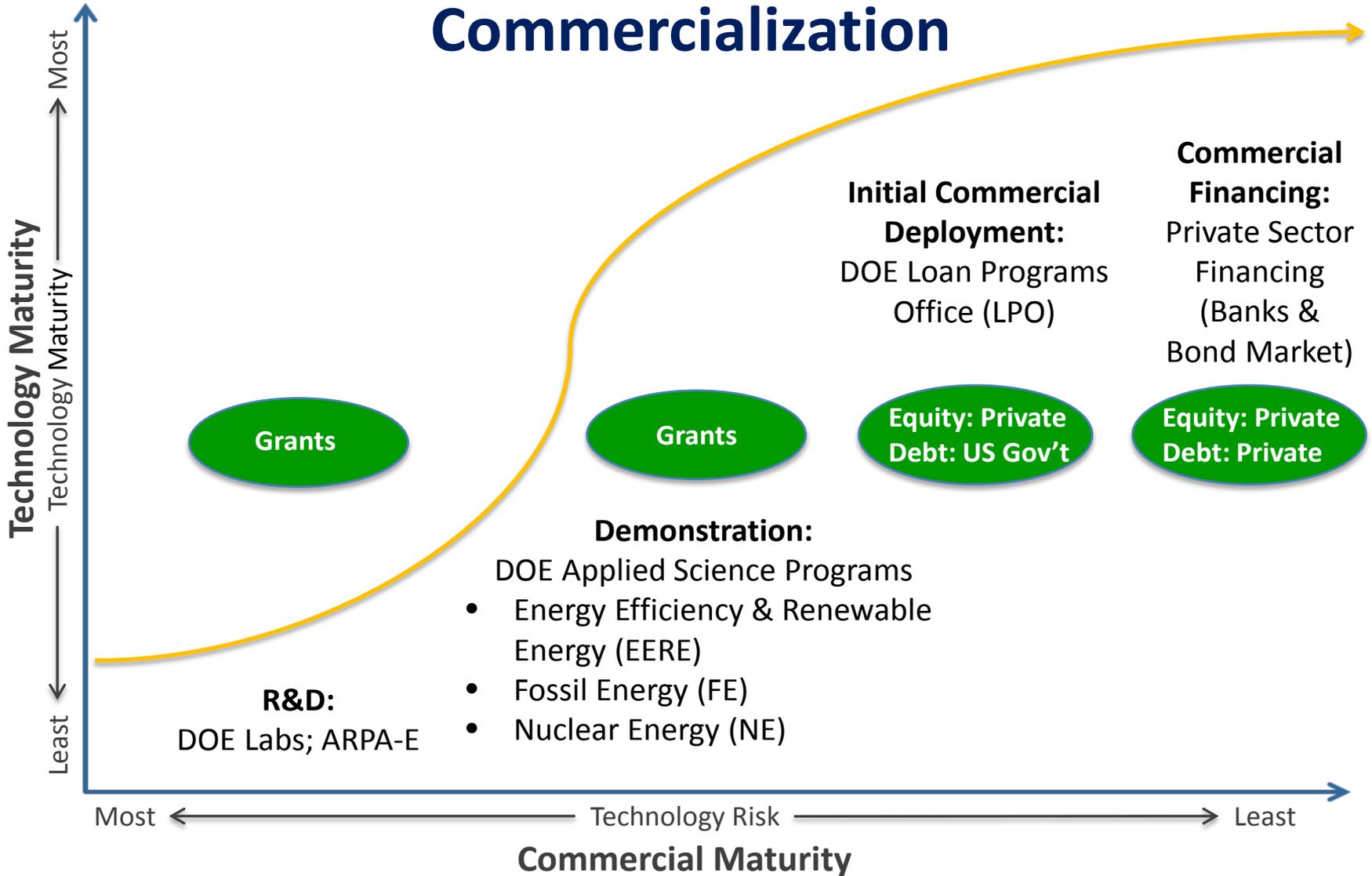


JISEA Annual Meeting Financing Clean Energy Panel

**Hugh Chen
Energy Policy and Systems Analysis
Department of Energy
March 11, 2015**

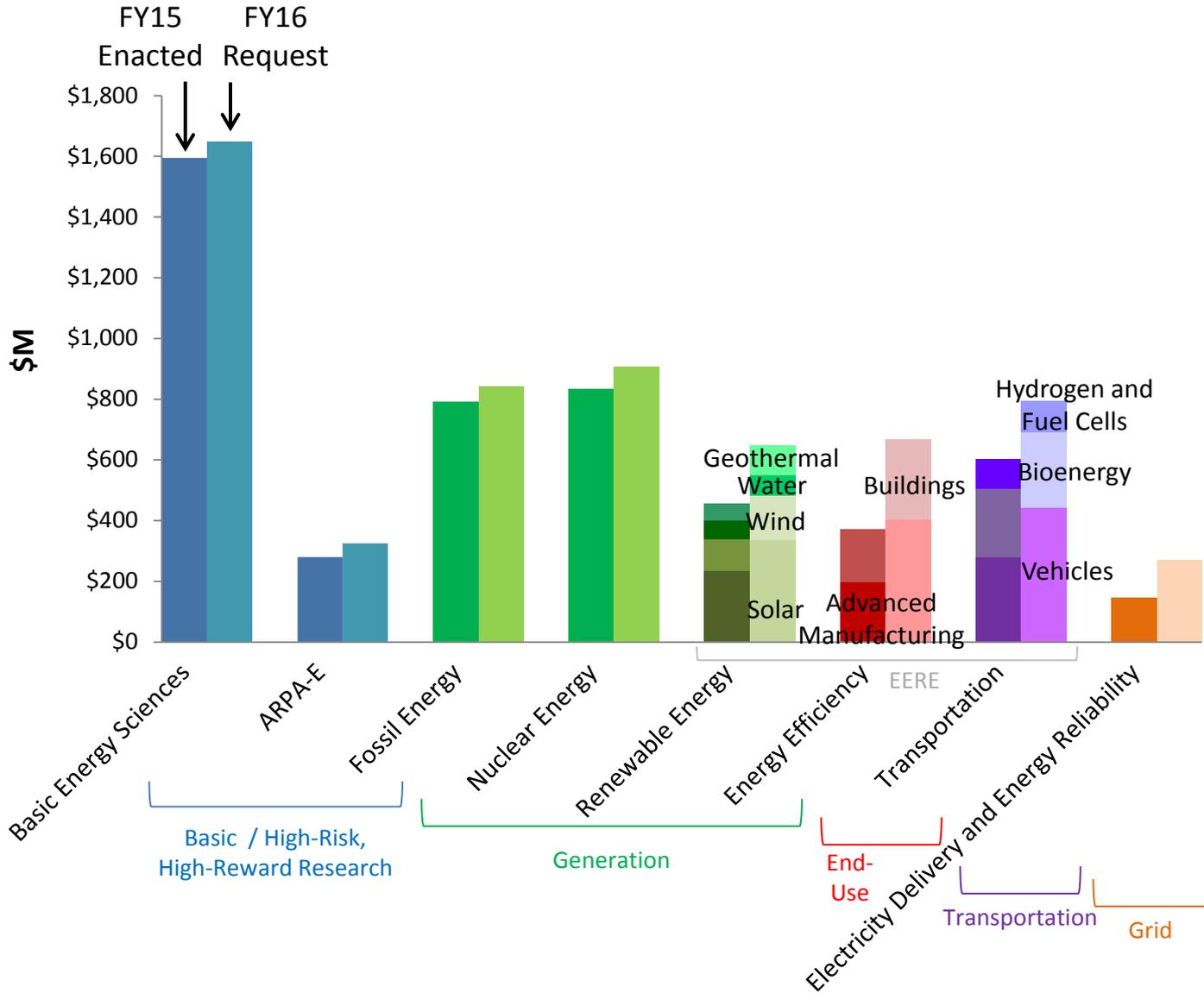


DOE Programs Support the Full Arc of Commercialization





DOE FY 2015-2016 Energy-Related Budget



- DOE accounts for the bulk of federal energy RD&D, but other agencies also support energy related activities
- Figure does not include loans
- Basic research and power generation represent the largest categories of energy RD&D at ~\$2B each (include maintaining associated research facilities)
- As a comparison comparison, FY09 ARRA (Recovery Act) funds for DOE energy RD&DD totaled ~\$7B

Sources: "FY2016 Budget Statistical Table by Organization" Table within DOE FY16 Congressional Budget Justification; ITIF's Energy Innovation Tracker 2013; Energy Technology Innovation Policy at Kennedy School of Government 2014.



Federal Energy-Related Loan Programs

DETAIL ON DOE Loan Guarantee

Department

Target/Authorizations

Energy

Advanced/clean technologies in: Renewables and Efficiency. Advanced auto manufacturing, Nuclear generation, Fossil Generation (CCS)

\$40 billion in total under current programs



**Agriculture/
Rural Utilities**

Energy infrastructure development - including renewable energy and energy efficiency assets - by rural utilities and cooperatives

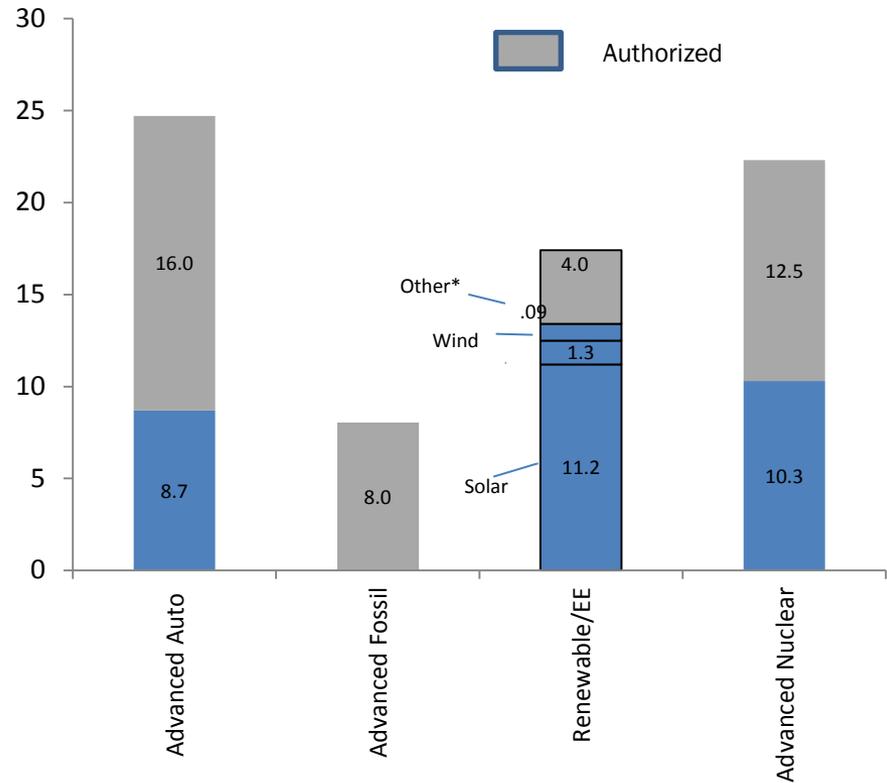
\$5.5 billion for 2015

**Housing and
Urban
Development**

Energy efficiency and renewable energy assets related to real estate/multifamily housing

\$250 billion for 2015

Billions of \$

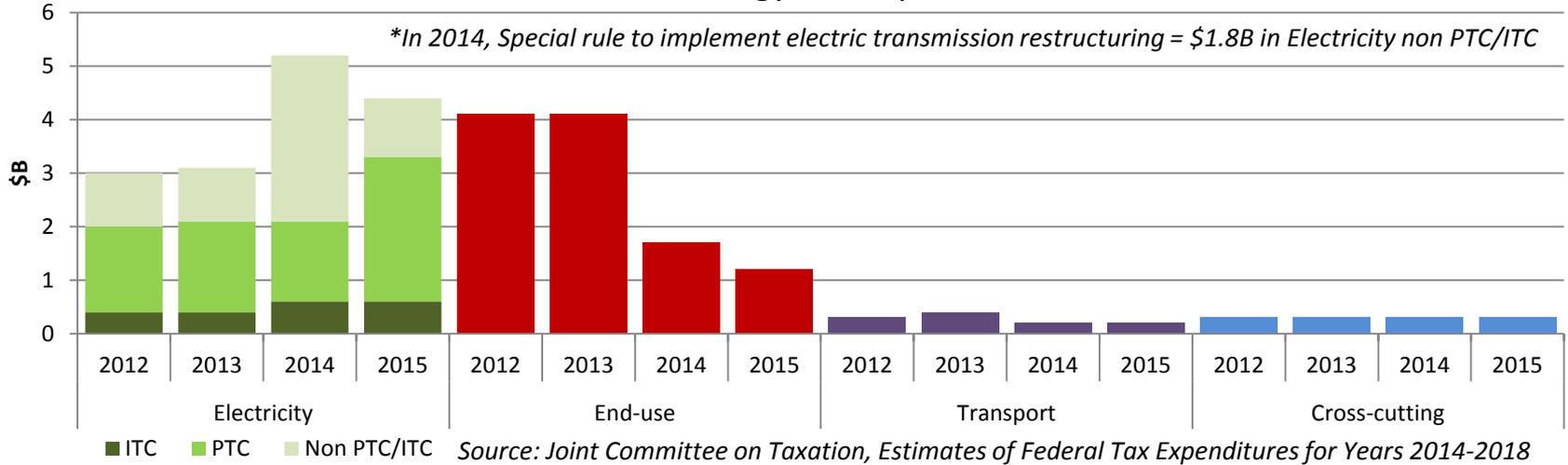


*Other includes storage, geothermal and transmission

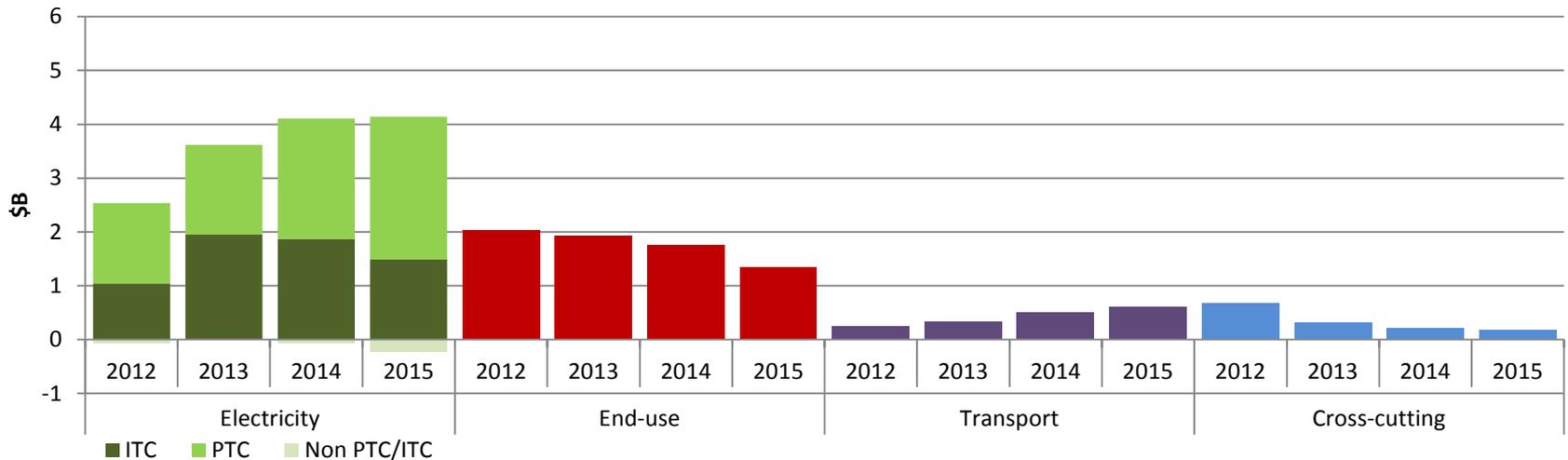


Clean Energy Tax Expenditure Estimates

JCT Estimates of Clean Energy Tax Expenditures 2012-2015



OMB Estimates of Clean Energy Tax Expenditures 2012-2015





Examples of Federally Coordinated, Energy-Related Finance Efforts

Clean Energy Investment Initiative - Announced by WH Feb 2015

- Identify opportunities to invest in technologies with high potential for climate impact reduction
- DOE to assist philanthropists and impact investors to scale up investments throughout the energy innovation pipeline, from laboratory R&D to startup funding to growth-stage financing
- <http://www.whitehouse.gov/the-press-office/2015/02/10/fact-sheet-obama-administration-announces-initiative-scale-investment-cl>

Build America Investment Initiative (BAII) - Announced by WH July 2014

- Facilitate partnerships between private sector investors and federal, state and local governments
- Increase investment in and modernization of ports, roads, bridges, broadband networks, drinking water and sewer systems and other projects
- <http://www.whitehouse.gov/the-press-office/2014/07/17/fact-sheet-building-21st-century-infrastructure-increasing-public-and-pr>

Quadrennial Energy Review (QER) - Presidential Memorandum Jan 2014

- White House led inter-agency effort to provide analytically-based energy policy recommendations
- DOE provides the secretariat support including analysis, stakeholder engagement, and process support
- First QER report nearly complete – focuses on transmission, storage, and distribution infrastructure
- <http://energy.gov/epsa/quadrennial-energy-review-qer>