Direct Federal Financial Interventions and Subsidies in Energy: An Update for Fiscal Year (FY) 2016

For

36th USAEE/IAEE North America Conference

September 24, 2018 | Washington, DC

By

Mark Schipper, Analyst

EIA mission: independent statistics and analysis

Mission: EIA collects, analyzes, and disseminates independent and impartial energy information to promote sound policymaking, efficient markets, and public understanding of energy and its interaction with the economy and the environment.

EIA is the Nation's premier source of energy information and, by law, its data, analyses, and forecasts are independent of approval by any other officer or employee of the U.S. Government.

EIA does not propose or advocate any policy positions.

Presentation draws from a new EIA report

- Reported subsidies: 1) are provided by the federal government, 2) provide a financial benefit with an identifiable federal budget impact, and 3) are specifically targeted at energy markets

- General exclusions include:
  - Accelerated depreciation tax schedules and domestic manufacturing tax deductions that apply to the energy sector and to other industries
  - Other federal programs−such as the renewable fuels standard and Price-Anderson Act that limits the liability of nuclear plant operators−are also not included because they are not direct financial interventions and lack a distinguishable federal budget impact
  - U.S. Department of Energy programs commonly considered basic R&D activities that support broadly applicable technologies
  - Energy-related trust funds financed by dedicated taxes and user fees (e.g., Black Lung Disability Trust Fund)

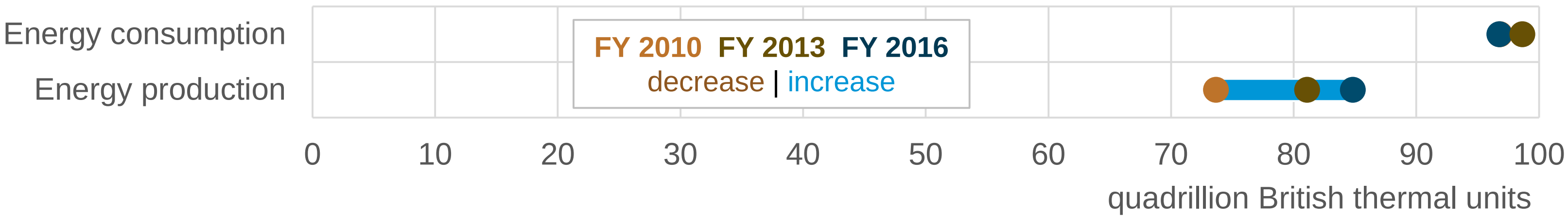
Report background

- Secretary of Energy's Grid Resiliency Study recommended EIA provide an update (FY 2016)
  - An inventory based on a specific federal subsidy criteria: Direct subsidies to producers and consumers; Tax expenditures-provisions in the tax code that reduce tax liability; R&D expenditures, Loans and loan guarantees

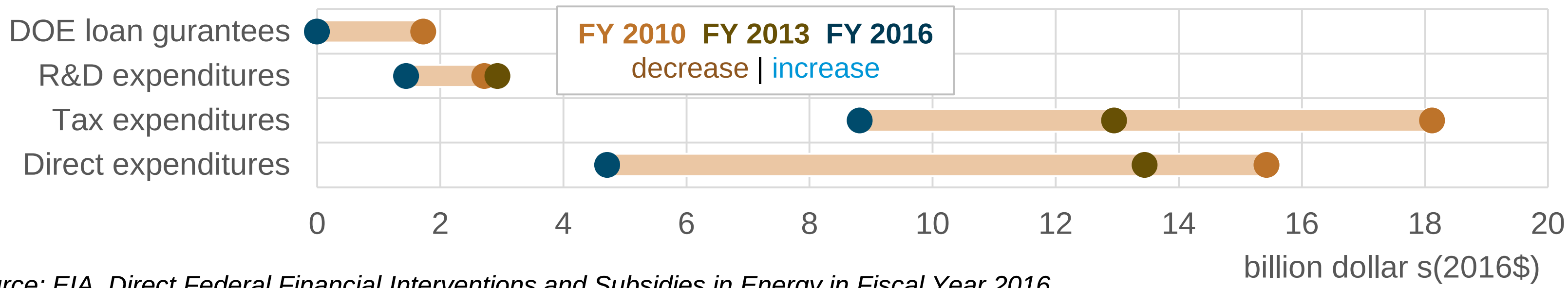
- Continuation of a periodic, occasional series of EIA reports
  - Requested by Congress; used by variety of stakeholders to highlight and discuss Federal support trends
  - Annual snapshot only looks at costs; benefits may accrue over a longer timeframe and are not within the scope of the report
  - Multi-year impact of some programs, such as the Production Tax Credit (PTC), complicates analysis of current-year impact

U.S. federal energy subsides are $15 billion in 2016, down from $38 billion in 2010 and $29 billion in 2013

U.S. energy production and consumption (FY 2010, 2013, and 2016)



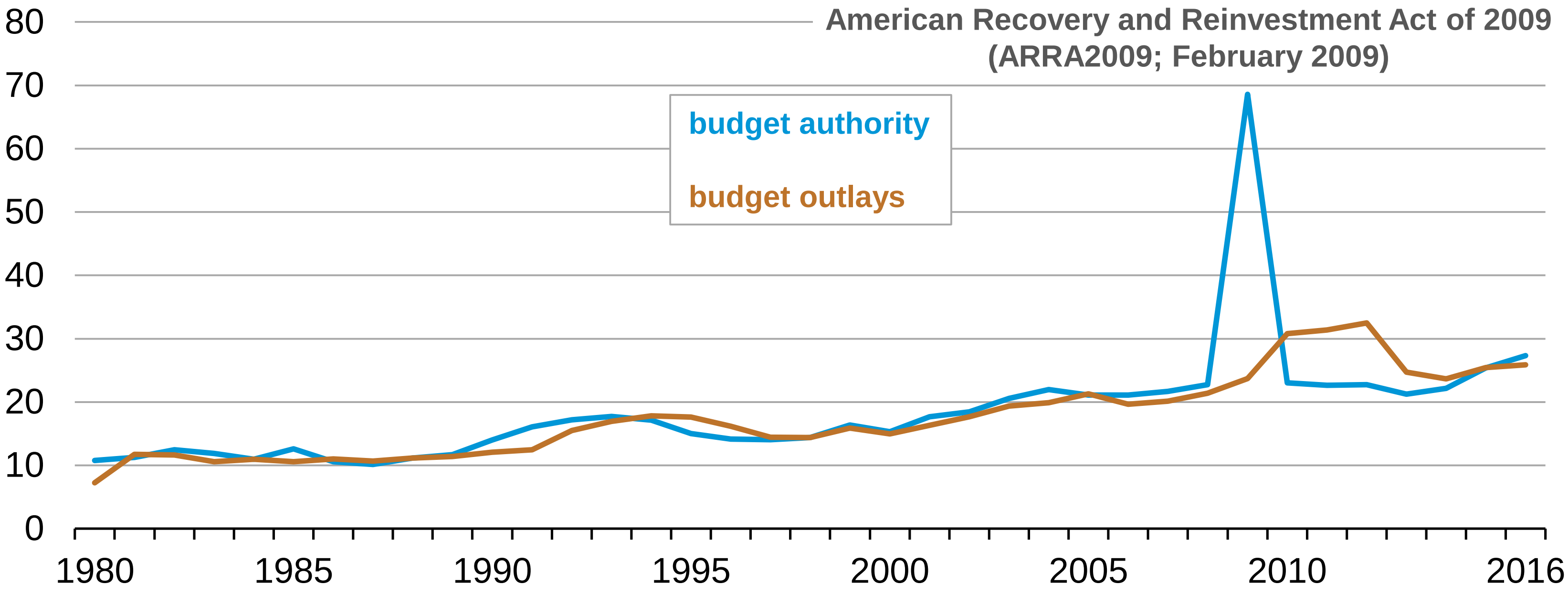
Energy subsidies by federal support type (FY 2010, 2013, and 2016)



Source: EIA, Direct Federal Financial Interventions and Subsidies in Energy in Fiscal Year 2016

Jobs and rebate programs provided as part of the ARRA2009 added billions more in temporary funding

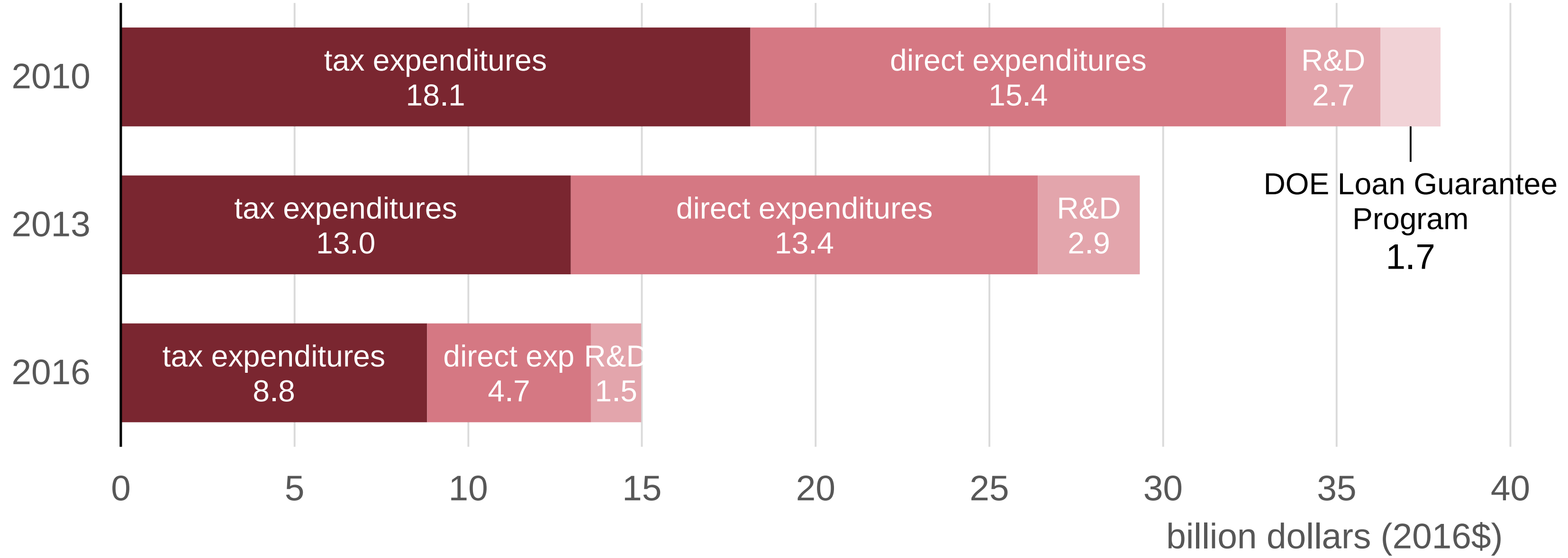
U.S. Department of Energy budget authority and outlays
(billion nominal dollars)



Source: Office of Management and Budget, Historical Tables, Tables 4.1 and 5.2

U.S. federal energy subsides are $15 billion in FY 2016, down from $38 billion in FY 2010 and $29 billion in FY 2013

Energy-specific subsidies by fiscal year and support
billion dollars (2016$)

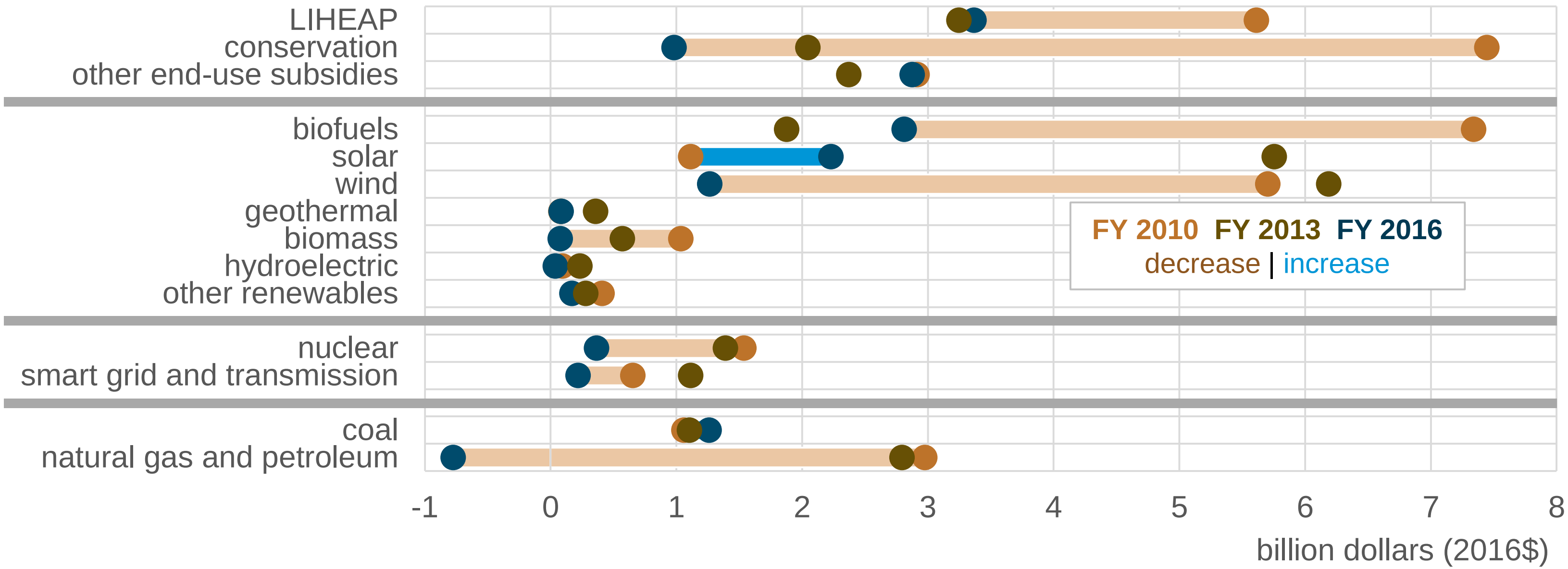


Source: EIA, Direct Federal Financial Interventions and Subsidies in Energy in Fiscal Year 2016

EIA uses a comprehensive data acquisition and analysis process to estimate how federal actions are distributed among categories

Federal support type (FY 2010, 2013, and 2016)

billion dollars (2016$)



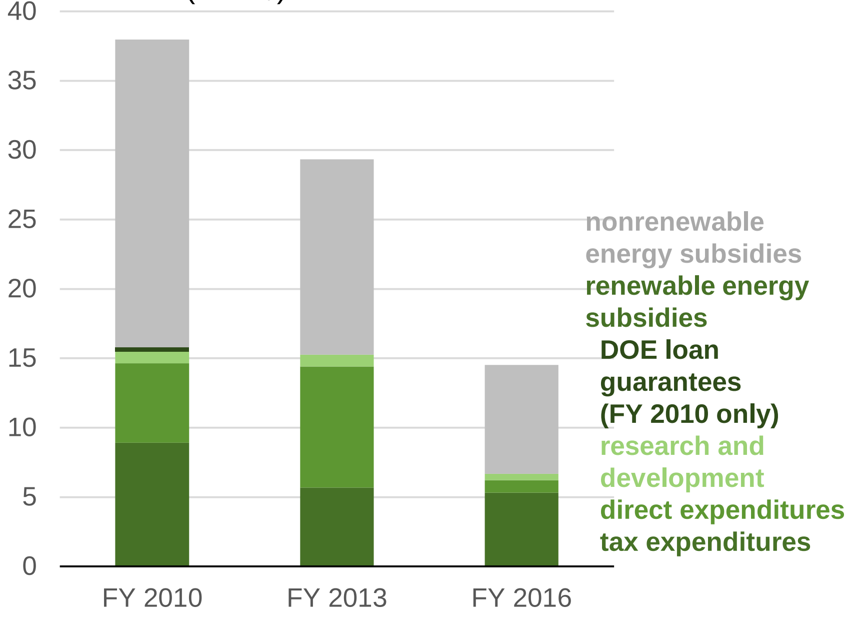
Source: EIA, Direct Federal Financial Interventions and Subsidies in Energy in Fiscal Year 2016

Renewable energy subsidies declined from $16 billion in FY 2010 to $7 billion in FY 2016

- Tax expenditures provided 80% of FY 2016 renewables subsidies. More than half (51%) of the $5.6 billion in renewable tax expenditures went to biofuels

- FY 2013-16 decrease in direct expenditures for renewable sources of electricity reflects the expired temporary government program that revised tax credits for a growing solar power industry, allowing subsidy applicants to receive grants in lieu of tax credits

Federal energy-related subsidies by type of support (fiscal years 2010, 2013, 2016)
billion dollars (2016$)

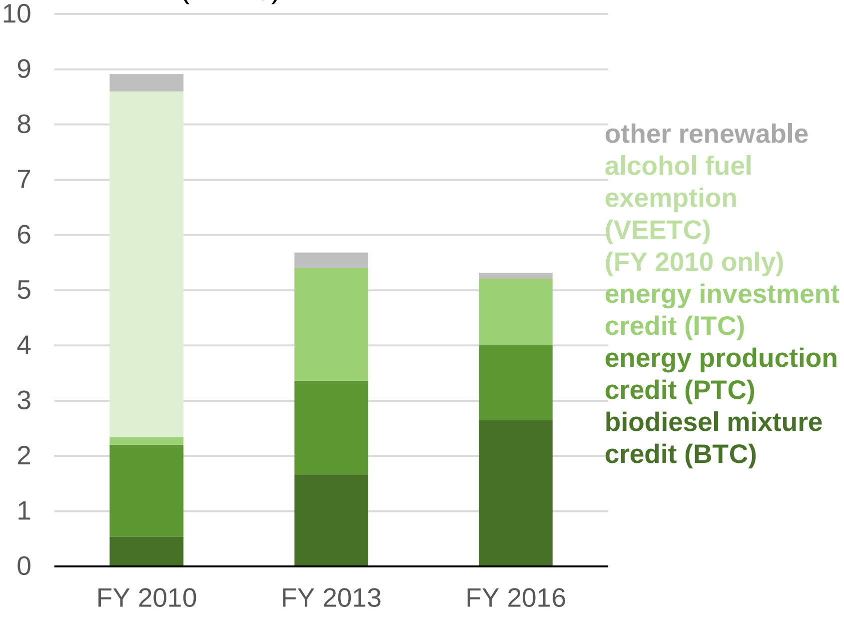


Renewable energy estimated tax expenditures decreased 40% between FY 2010 and FY 2016

- During FY 2010, a 45 cent per gallon excise tax credit was available to marketers and blenders of ethanol blended gasoline, resulting in a tax expenditure of $6 billion. The program, however, expired at the end of 2011

- Starting with OMB totals, PTC and ITC credits taken in FY 2016 amounted to $1.4 billion and $1.2 billion, respectively (EIA estimated renewable categories)

Federal renewable energy-related tax expenditures (fiscal years 2010, 2013, 2016)
billion dollars (2016$)



Source: EIA, Direct Federal Financial Interventions and Subsidies in Energy in Fiscal Year 2016

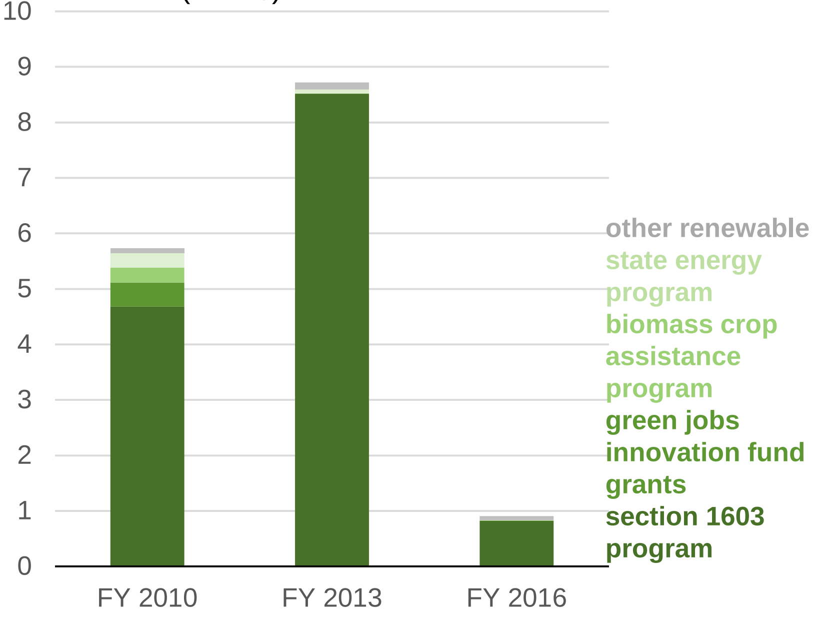
Renewable energy direct expenditures decreased 84% between FY 2010 and FY 2016

- Direct expenditures for renewable energy decreased 90%, from nearly $9 billion in FY 2013 to about $1 billion in FY 2016

- Nearly all renewable energy direct expenditures for FY 2010, FY 2013, and FY 2016 resulted from provisions of ARRA2009

- Outlays from Section 1603 grants for some projects continued into FY 2016

Federal renewable energy-related direct expenditures (fiscal years 2010, 2013, 2016)
billion dollars (2016$)



Source: EIA, Direct Federal Financial Interventions and Subsidies in Energy in Fiscal Year 2016

Thank you!

Mark Schipper | phone: 202-586-1136
| email: mark.schipper@eia.gov

Richard Bowers | phone: 202-586-8586
| email: richard.bowers@eia.gov

Steven Hanson | phone: 202-287-5826
| email: steven.hanson@eia.gov

Fred Mayes | phone: 202-586-1508
| email: fred.mayes@eia.gov

Direct Federal Financial Interventions and Subsidies in Energy in Fiscal Year 2016 | https://www.eia.gov/analysis/requests/subsidy/ (see report for a complete list of authors)

U.S. Energy Information Administration home page | www.eia.gov

Annual Energy Outlook | www.eia.gov/outlooks/aeo